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DEPARTMENT OF AGRICULTURE

CENTRAL EXPERIMENTAL FARM
OTTAWA, CANADA



RESULTS OBTAINED IN 1897

FROM

TRIAL PLOTS

OF

GRAIN, FODDER CORN,

AND ROOTS

BULLETIN No. 29

JANUARY, 1898

PUBLISHED BY DIRECTION OF THE HON. SYDNEY A. FISHER, MINISTER OF AGRICULTURE.

To the Honourable
The Minister of Agriculture.

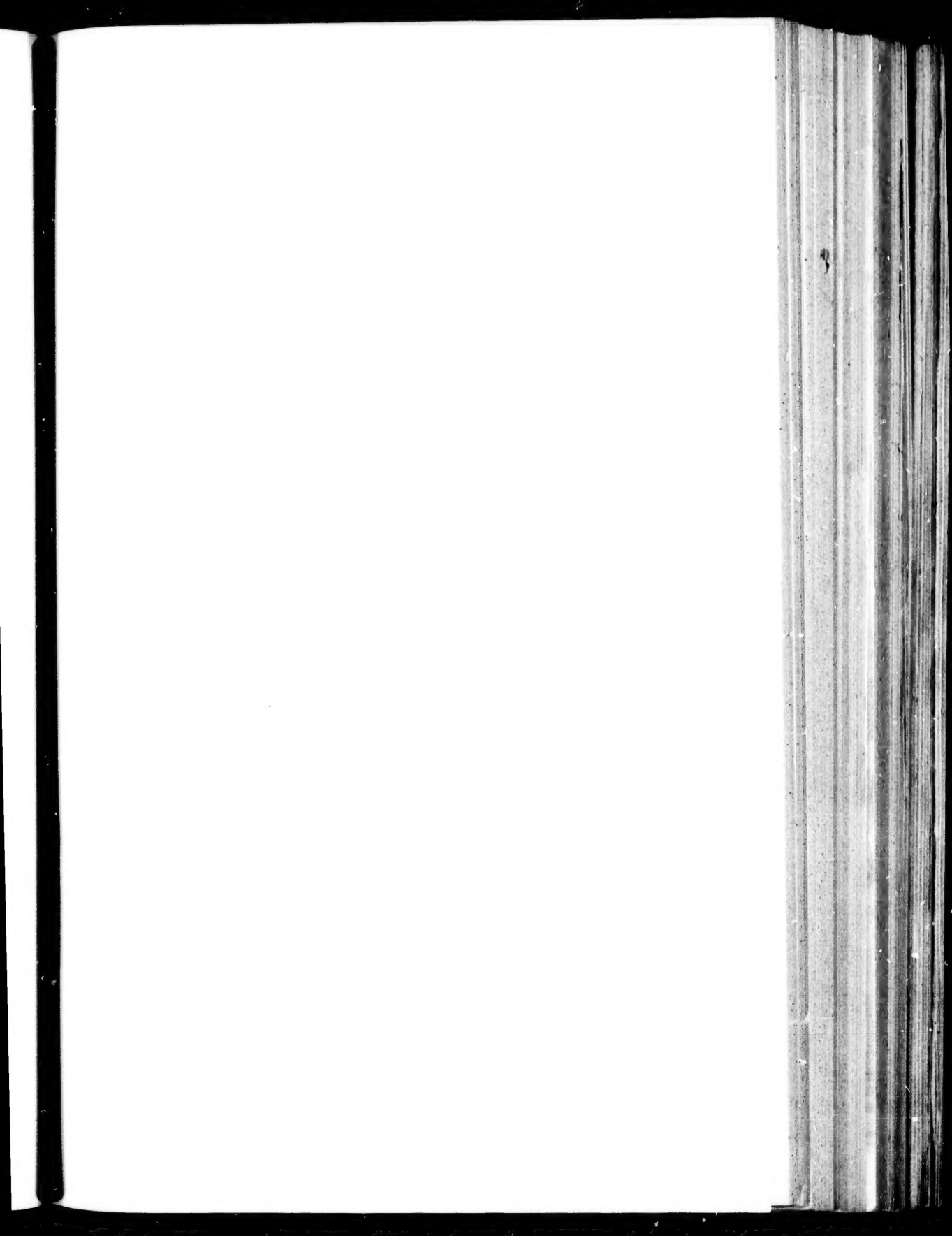
SIR — I have the honour to submit for your approval, bulletin 29 of the Experimental Farm series, prepared by myself. In this bulletin will be found the results of a large number of experiments which have been carried on at all the experimental farms during the season of 1897, with oats, barley, spring wheat, pease, Indian corn, turnips, mangels, carrots and potatoes, in uniform plots. The average results are also given of three years' tests of the uniform plots of oats, barley, spring wheat and potatoes. This work has been undertaken with the object of gaining information as to the relative productiveness and earliness of the many varieties under test. The results show wide variations in the weight of the crops grown and point to the importance of greater care being exercised by farmers in choosing varieties of seed for sowing.

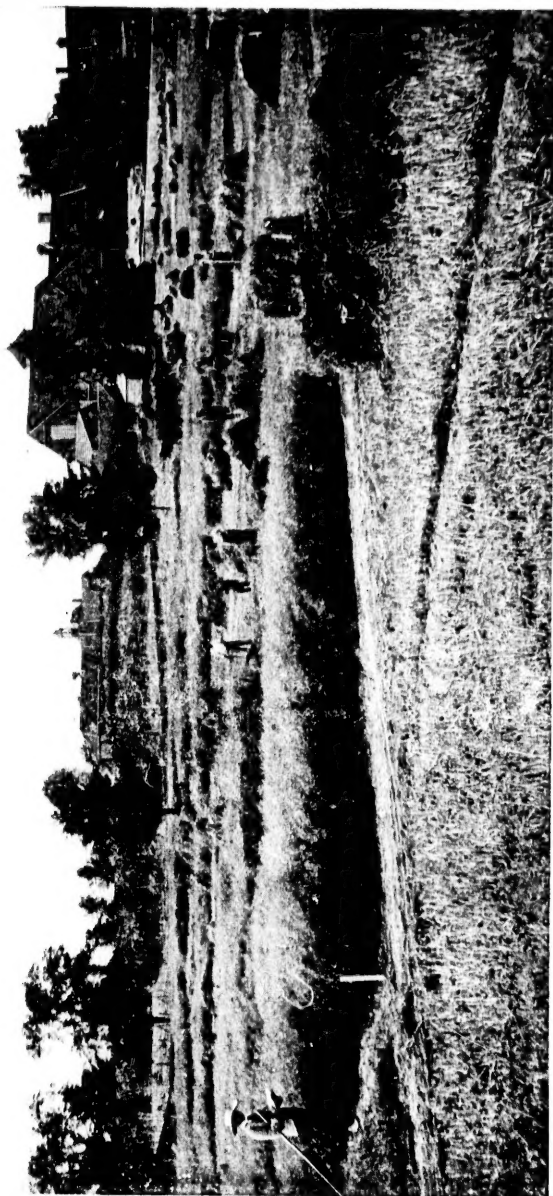
I trust that the information given, covering the experience gained under many of the more important climatic variations found in the Dominion, will be useful to farmers everywhere throughout Canada.

I have the honour to be,
Your obedient servant,

WM. SAUNDERS,
Director Experimental Farms.

OTTAWA, 10th January, 1898.





VIEW OF SOME OF THE UNIFORM TEST PLOTS OF GRAIN, 1897, AT THE CENTRAL EXPERIMENTAL FARM

GRAIN

In March accounts of test plots of corn, turnip, experimental farm conducted, present bulk these import Canada may the selection

In these blocks of land each having grain, and to acre each, s days. The seed used pe

These ex information conditions, crops, also to this country

Particular experiments obtained at different sources order of the

RESULTS OBTAINED IN 1897

FROM TRIAL PLOTS OF

GRAIN, FODDER CORN, AND ROOTS

BY WILLIAM SAUNDERS, LL.D., F.R.S.C., F.L.S., &c.

Director Experimental Farms.

In March, 1896, and in January, 1897, bulletins were published giving accounts of the crops obtained in 1895 and 1896, from a large number of test plots of many varieties of oats, barley, spring wheat, pease, Indian corn, turnips, mangels, carrots and potatoes grown at each of the experimental farms. During the season of 1897, similar lines of work have been conducted, and the crops which have been harvested are reported in the present bulletin. It is hoped that by the prompt issue of the results of these important tests in a form convenient for reference, the farmers of Canada may be able to gain information which will be useful to them in the selection of varieties for sowing during the coming season.

In these experiments the important crops named have been grown on blocks of lands selected so as to be as nearly uniform as possible in character, each having an area sufficient to include all the varieties of one sort of grain, and these have been arranged in plots of one-tenth or one-twentieth acre each, side by side, and usually all sown on the same day or within two days. The seed sown has been uniform in character, and the quantity of seed used per acre and the manner of sowing or planting has been the same.

These experiments have been undertaken for the purpose of gaining information as to the relative productiveness, when grown under similar conditions, of the many varieties in cultivation of these valuable farm crops, also to ascertain their periods of ripening in the different climates of this country.

Particulars are here submitted of the crops produced at each of the experimental farms from all the varieties sown, also the average yield obtained at all these farms. The time required for the maturing of the different sorts is also given, and they are arranged in every case in the order of their productiveness at the Central Experimental Farm at Ottawa.

At the Central Farm, owing to unfavourable weather before and during the harvest time, most of the cereals suffered much from rust, which materially reduced the weight of the crops, and the returns are lower than usual. At the branch farm at Nappan, N.S., the weather in the spring was unusually wet, which delayed seeding and shortened the season for growth. Nevertheless most of the crops of cereals there were well up to the average. At the branch farm at Brandon the season was unusually dry; the rainfall was only about half of the usual quantity. Cereals also were more or less injured by spring frosts and strong winds. Oats suffered most from these unfavourable conditions, some of the varieties sown were entirely destroyed, and others much reduced in yield. On this account some of the best sorts which have heretofore been near the head of the list as most productive, have fallen much behind, and the results at Brandon this season cannot be taken as a fair index of the relative productiveness of the different varieties under trial. The returns from the plots of wheat, barley and pease were well up to, if not above, the average. The yield of fodder crops and roots has been light.

At the branch farm at Indian Head, N.W.T., cereals also suffered from drought and winds in the spring, and some varieties, especially oats, were much injured, but a copious rainfall about the middle of June produced a rapid growth and development and resulted in good crops of most of the cereals, many of them much above the average. The yield of roots and fodder crops was small. At the branch farm at Agassiz, B.C. the weather was favourable to growth throughout the season and crops of all sorts were good.

OATS.

Sixty-three varieties of oats have been tested during the season of 1897. These include ten of the cross-bred sorts which have been produced at the experimental farms, namely: Medal, Miller, Master, Russell, Olive, Brandon, King, Pense, Oxford and Cromwell. The size of the plots on which they were grown was one-tenth of an acre each at Brandon, Man., and at Indian Head, N.W.T., and one twentieth of an acre each at Ottawa, Ont., Nappan, N.S. and Agassiz, B.C. The quantity of seed sown of each variety was in the proportion of two bushels per acre, and the dates of sowing were the following:—Ottawa, 5th and 6th May; Nappan, 12th to 20th May; Brandon, 1st May; Indian Head, 3rd May, and at Agassiz, 16th April. The average crop of all these varieties of oats at each of the experimental farms was as follows:—At Ottawa, 39 bush. 23 lbs. per acre; Nappan, 59 bush. 5 lbs.; Brandon, 46 bush. 32 lbs.; Indian Head, 71 bush.; and at Agassiz, 67 bush. 29 lbs. per acre. The average return given by the whole of the varieties at all the farms was 56 bush. 31 lbs. per acre. Particulars as to the character of the land in each case, also its preparation and treatment will be found in the Annual Report of the Experimental Farms for 1897.

Name of
Number.

- 1 Golden G
- 2 Mennonite
- 3 Imp'd. Au
- 4 Early Eta
- 5 White Sch
- 6 Ey. Golde
- 7 White Rus
- 8 Columbus
- 9 Wallis
- 10 Joannette
- 11 Amer. Tri
- 12 Wide Awa
- 13 Banner
- 14 Golden Be
- 15 Lincoln
- 16 Bonanza
- 17 Abundance
- 18 American
- 19 Buckbee's
- 20 Medal
- 21 Siberian O
- 22 Miller
- 23 Scottish Ch
- 24 Holstein Pr
- 25 Victoria Pri
- 26 Improved L
- 27 Master
- 28 Hazlett's Se
- 29 Welcome
- 30 White Wond
- 31 Early Gothl
- 32 Siberian
- 33 Bavarian
- 34 Russell
- 35 Olive
- 36 Brandon
- 37 Prize Cluster
- 38 King
- 39 Pense
- 40 Early Maine
- 41 Rosedale
- 42 Oxford
- 43 Early Blossom
- 44 Abyssinia
- 45 Cromwell
- 46 Rennie's Priz
- 47 Imported Iris
- 48 Oderbruch
- 49 Cream Egypt
- 50 Winter Grey
- 51 Early Archau
- 52 Golden Tartar
- 53 Cal. Prolific
- 54 Black Beauty
- 55 Newmarket
- 56 Flying Scotch
- 57 Coulommiers

UNIFORM TEST PLOTS OF OATS.

Number.	Name of Variety.	Yield at the several Experimental Farms, Season of 1897.										Number of Days from Sowing to Harvesting.													
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.	
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	
1	Golden Giant ..	57	12 53	18	..	..	..	80	16 89	14 70	5	103	117	117	119	116	114	116	116	116	116	114	114	114
2	Mennonite ..	56	11 67	2	..	..	..	80	.. 57	32 65	11	91	104	117	117	119	107	105	119	107	105	119	107	105
3	Imp'd. American.	53	28 72	12	..	..	..	86	26 77	22 72	22	93	109	117	117	119	121	110	119	121	110	119	121	110
4	Early Etampes ..	53	23 67	2 56	..	..	..	6 71	16 66	16 62	33	94	115	115	115	112	119	111	112	119	111	112	119	111
5	White Schonen ..	53	8 50	.. 50	10 72	2 68	28 58	30	..	..	..	93	106	120	117	109	109	109	117	109	109	109	109	109
6	Ey. Golden Prol.	50	30 51	26 76	26 80	10 65	10 65	..	..	..	..	93	107	109	112	119	108	108	112	119	108	108	108	108
7	White Russian ..	50	30 73	18 35	30 71	12 70	.. 60	11	..	..	..	92	106	116	109	109	106	106	109	109	107	109	109	107
8	Columbus ..	49	29 67	2 52	12 85	30 73	18 65	11	..	..	..	92	107	116	109	109	107	107	109	109	107	109	109	107
9	Wallis ..	49	9 87	22 39	4 73	28 69	4 63	27	..	..	..	93	98	116	117	121	109	109	117	121	109	109	109	107
10	Joanette ..	49	4 50	.. 71	16 56	16 61	16 57	24	..	..	..	93	115	112	112	119	110	110	112	119	110	112	119	110
11	Amer. Triumph ..	49	3 44	4	..	.. 59	24 69	24 55	22	..	..	92	107	117	117	119	107	107	109	119	107	109	109	107
12	Wide Awake ..	48	23 61	26 18	18 74	14 73	18 55	13	..	..	..	94	116	116	109	122	109	109	116	122	109	109	109	107
13	Banner ..	47	7 60	.. 53	8 52	2 64	4 55	11	..	..	..	96	107	110	117	117	109	109	117	117	109	109	109	107
14	Golden Beauty ..	47	7 61	26 57	12 61	16 66	26 58	31	..	..	..	92	107	111	109	119	108	108	111	109	108	108	108	108
15	Lincoln ..	46	6 64	24 37	12 73	28 87	22 61	32	..	..	..	94	98	116	109	110	105	105	116	109	105	105	105	105
16	Bonanza ..	45	30 52	32	.. 67	12 71	26 59	16	..	..	..	90	107	111	106	117	105	105	106	117	105	105	105	105
17	Abundance ..	45	15 53	18 38	28 62	22 52	22 50	21	..	..	..	93	99	116	117	121	109	109	117	121	109	109	109	107
18	American Beauty	45	10 64	24	.. 75	30 74	24 65	5	..	..	..	92	105	111	109	119	106	106	109	119	106	106	106	106
19	Buckbee's Illinois	44	24 44	4	.. 79	4 76	16 61	3	..	..	..	96	110	117	117	120	111	111	117	120	111	111	111	111
20	Medal ..	44	14 52	32 31	16 73	28 62	2 52	32	..	..	..	94	107	117	119	117	111	111	119	117	111	111	111	111
21	Siberian O.A.C.	44	14 82	12 57	2 86	16 60	10 66	4	..	..	..	96	109	116	109	122	110	110	109	122	110	110	110	110
22	Miller ..	43	33 45	30 48	8 73	8 68	18 55	33	..	..	..	96	107	110	119	117	110	110	119	117	110	110	110	110
23	Scottish Chief ..	43	28 47	22	.. 67	12 73	18 58	3	..	..	..	90	107	111	109	122	107	107	109	122	107	107	107	107
24	Holstein Prolific	43	28 55	30 55	.. 80	.. 62	22 59	16	..	..	..	94	107	111	112	121	109	109	112	121	109	109	109	107
25	Victoria Prize ..	43	18 44	4 52	2 50	10 52	32 48	18	..	..	..	90	110	109	117	107	107	107	117	107	107	107	107	107
26	Improved Ligowo	42	17 57	22 47	12 73	32 63	18 56	34	..	..	..	91	107	116	109	117	108	108	109	117	108	108	108	108
27	Master ..	42	12 59	14 44	14 68	18 52	12 53	14	..	..	..	93	98	116	117	116	103	103	117	116	103	103	103	103
28	Hazlett's Seizure	42	12 78	22 32	22 82	12 68	28 60	33	..	..	..	96	93	115	109	117	106	106	109	117	106	106	106	106
29	Welcome ..	41	16 61	26 35	.. 71	12 66	12 55	6	..	..	..	90	106	104	106	119	105	105	106	119	105	105	105	105
30	White Wonder ..	40	25 76	16	.. 66	6 58	18 60	16	..	..	..	96	93	111	106	121	103	103	106	121	103	103	103	103
31	Early Gothland ..	40	10 64	4	.. 82	12 62	12 62	9	..	..	..	92	99	111	109	119	105	105	109	119	105	105	105	105
32	Siberian ..	40	5 52	32	.. 65	20 67	22 56	20	..	..	..	103	109	111	119	124	114	114	119	124	114	114	114	114
33	Bavarian ..	39	9 72	12	.. 72	2 75	30 64	30	..	..	..	96	99	111	109	121	106	106	109	121	106	106	106	106
34	Russell ..	39	4 48	28 62	22 69	4 59	14 55	28	..	..	..	94	99	109	112	121	107	107	112	121	107	107	107	107
35	Olive ..	38	23 69	..	.. 85	.. 65	10 62	8	..	..	..	94	107	111	119	121	110	110	119	121	110	110	110	110
36	Brandon ..	38	13 48	28	.. 52	12 68	8 51	32	..	..	..	96	103	111	117	117	108	108	117	117	108	108	108	108
37	Prize Cluster ..	37	7 61	26 56	6 69	14 58	28 56	23	..	..	..	90	106	101	106	115	104	104	106	115	104	104	104	104
38	King ..	37	2 40	.. 42	12 66	26 71	6 51	16	..	..	..	96	107	110	106	122	108	108	107	110	106	122	108	108
39	Pense ..	37	2 55	10 64	24 68	28 42	32 53	26	..	..	..	95	107	116	112	121	110	110	107	116	112	121	110	110
40	Early Maine ..	36	31 50	.. 52	2 78	8 92	32 62	1	..	..	..	95	102	115	119	117	110	110	107	115	119	117	110	110
41	Rosedale ..	36	6 64	4 67	12 83	28 70	20 64	14	..	..	..	95	107	111	119	122	111	111	107	111	122	111	111	111
42	Oxford ..	36	6 40	.. 48	28 77	22 60	20 52	22	..	..	..	96	110	110	117	119	110	110	107	110	119	110	110	110
43	Early Blossom ..	36	1 59	14 51	26 79	4 77	22 59	27	..	..	..	95	110	111	119	121	111	111	107	111	121	111	111	111
44	Abyssinia ..	35	30 62	32 33	28 87	2 58	28 55	24	..	..	..	95	102	122	119	118	111	111	107	122	119	118	111	111
45	Cromwell ..	35	25 50	..	.. 73	30 71	26 57	29	..	..	..	96	107	111	112	117	103	103	107	117	103	103	103	103
46	Rennie's Prize ..	34	24 51	26 29	34 66	6 64	24 49	16	..	..	..	92	98	109	106	118	105	105	106	118	105	105	105	105
47	Imported Irish ..	34	4 49	14 28	8 67	2 64	4 48	20	..	..	..	89	98	114	106	116	105	105	106	116	105	105	105	105
48	Oderbruch ..	33	4 62	32 37	2 67	12 82	32 56	23	..	..	..	95	107	110	109	124	109	109	107	110	124	109	109	109
49	Cream Egyptian ..	33	3 62	32 26	26 65	20 70	20 51	27	..	..	..	95	98	110	109	122	107	107	109	122	107	107	107	107
50	Winter Grey ..	31	26 58	38 35	.. 68	18 60	.. 50	30	..	..	..	90	104	115	106	107	105	105	106	107	105	105	105	105
51	Early Archangel ..	31	26 40	.. 46	16 75	30 66	16 52	4	..	..	..	92	104	109	109	117	106	106	109	117	106	106	106	106
52	Golden Tartarian ..	31	8 72	12 83	18 63	18 69	14 64	..	..	..	..	103	117	114	117	117	114	114	117	117	114	114	114	114
53	Cal. Prolific Blk.	30	20 67	22 68	8 68	28 61	8 59	10	..	..	..	99	102	114	112	117	109	109	112	117	109	109	109	109
54	Black Beauty ..	30	1 57	22	.. 72	32 92	32 63	13	..	..	..	92	105	111	117	117	108	108	107	117	108	108	108	108
55	Newmarket ..	28	32 61	26 38	28 58	28 62	32 50	9	..	..	..	90	105	102	117	122	107	107	105	122	107	107	107	107
56	Flying Scotchman	28	23 82	12 47	12 79	24 74	4 62	15	..	..	..	93	93	110	112	117	11							

UNIFORM TEST PLOTS OF OATS—Continued.

Number.	Name of Variety.	Yield of the Several Experimental Farms, Season of 1897.										Number of Days from Sowing to Harvesting													
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N. W. T.		Agassiz, B. C.		Average of all Farms.		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N. W. T.		Agassiz, B. C.		Average of all Farms.	
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	
58	White Monarch..	27	32 64	24	.....	70	10 67	2	57	17	102	98	.....	119	121	110	110	110	110	110	110	110	110	110
59	Mortgage Lifter..	27	17 69	14	44	26	63	8 66	2	54	8	89	105	101	106	110	102	102	102	102	102	102	102	102	
60	Prolific Black Tartarian ..	23	11 55	10	.....	60	20 70	..	52	10	99	110	.....	117	121	112	112	112	112	112	112	112	112	112
61	Doncaster Prize..	23	8 65	30	20	10	65	20 70	10	49	2	102	98	111	119	108	108	108	108	108	108	108	108	108	
62	Poland.....	21	11 51	26	28	8	73	8 62	17	47	14	93	93	111	106	108	102	102	102	102	102	102	102	102	
63	Scotch Hopetoun	18	3 53	18	54	24	57	22 64	24	49	25	102	107	116	117	121	113	113	113	113	113	113	113	113	

Eighteen varieties are not reported on from Brandon as these were destroyed by frost and wind.

The twelve varieties of oats which have produced the largest crops during 1897 at the several experimental farms are the following:—

CENTRAL EXPERIMENTAL FARM, OTTAWA.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Golden Giant	57	12	7. White Russian.....	50	30
2. Mennonite.....	56	11	8. Columbus.....	49	29
3. Improved American.....	53	28	9. Wallis.....	49	9
4. Early Etampes.....	53	23	10. Joanette.....	49	1
5. White Schonen.....	53	8	11. American Triumph.....	49	3
6. Early Golden Prolific.....	50	30	12. Wide Awake	48	23

An average yield for the twelve sorts of 51 bushels 29 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Wallis.....	87	22	7. Bavarian	72	12
2. Siberian O.A.C.....	82	12	8. Golden Tartarian.....	72	12
3. Flying Scotchman.....	82	12	9. Improved American.....	72	12
4. Hazlett's Seizure.....	78	22	10. Mortgage Lifter	69	14
5. White Wonder.....	76	16	11. California Prolific Black.....	67	21
6. White Russian.....	73	18	12. Columbus.....	67	2

An average yield of 75 bushels 6 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Golden Tartarian.....	83	18	7. Russell.	62	22
2. Early Golden Prolific.....	76	26	8. Golden Beauty.....	57	12
3. Joanette.....	71	16	9. Siberian O. A. C	57	2
4. California Prolific Black	68	8	10. Prize Cluster.....	56	6
5. Rosedale.....	67	12	11. Early Etampes.....	56	6
6. Pense	64	24	12. Holstein Prolific.....	55	..

An average yield of 64 bushels 24 lbs. per acre.

EXPERI

1. Abyssin
2. Improv
3. Siberia
4. Colum
5. Olive
6. Roseda

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1. Early M
2. Black
3. Golden
4. Lincoln
5. Oderbr
6. Early P

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EXPERIMENTAL FARM FOR THE N.W. TERRITORIES, INDIAN HEAD, N.W.T.

	Per Acre. Bush. Lbs.			Per Acre. Bush. Lbs.	
1. Abyssinia	87	2	7. Hazlett's Seizure	82	12
2. Improved American	86	26	8. Early Gothland	82	12
3. Siberian O. A. C.	86	16	9. Early Golden Prolific	80	10
4. Columbus	85	30	10. Golden Giant	80	10
5. Olive	85	..	11. Mennonite	80	..
6. Rosedale	83	28	12. Holstein Prolific	80	..

An average yield of 83 bushels 12 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre. Bush. Lbs.			Per Acre. Bush. Lbs.	
1. Early Maine	92	32	7. Improved American	77	22
2. Black Beauty	92	32	8. Buckbee's Illinois	76	16
3. Golden Giant	89	14	9. Bavarian	75	30
4. Lincoln	87	22	10. American Beauty	74	24
5. Oderbruch	82	32	11. Flying Scotchman	74	4
6. Early Blossom	77	22	12. Columbus	73	18

An average yield of 81 bushels 11 lbs. per acre.

The twelve varieties which have produced the largest crops during 1897, taking the average results obtained at all the experimental farms are:—

	Per Acre. Bush. Lbs.			Per Acre. Bush. Lbs.	
1. Improved American	72	22	7. Early Golden Prolific	65	..
2. Golden Giant	70	5	8. Bavarian	64	30
3. Siberian, O. A. C.	66	4	9. Rosedale	64	14
4. Columbus	65	11	10. Golden Tartarian	64	..
5. Mennonite	65	11	11. Wallis	63	27
6. American Beauty	65	5	12. Black Beauty	63	13

An average yield of 65 bushels 29 lbs. per acre.

The Banner does not appear in this select list this year, owing to its being injured at Brandon and to its being sown in a very exposed and wind-swept situation at Indian Head. At this latter farm the crop on the "uniform test plots" was only 52 bushels 2 lbs. per acre, whereas the same seed of Banner oats used on the "early medium and late sown plots" gave a return of 101 bushels 16 lbs. per acre.

BARLEY.

The trial plots of barley have included thirty-five varieties in all, fifteen different sorts of two-rowed and twenty of six-rowed. Among the two-rowed sorts are included eight hybrid varieties which have been produced at the experimental farms, namely: Sidney, Victor, Beaver, Pacer, Nepean, Bolton, Monck and Rigid. Among the six-rowed sorts there are nine of these hybrids, namely: Pioneer, Trooper, Royal, Stella, Vanguard, Nugent, Summit, Phoenix and Surprise. The plots were of the same size as those sown with oats. The quantity of seed used in each case was at the rate of two bushels per acre, and the dates of sowing were the following: Ottawa, 30th April to 3rd May; Nappan, 25th and 26th May; Brandon, 13th May; Indian Head, 5th May; and at Agassiz, 17th April.

UNIFORM TEST PLOTS OF TWO-ROWED BARLEY.

Number.	Name of Variety.	Yield of the Several Experimental Farms, Season of 1897.								Number of Days from Sowing to Harvesting.					
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.		Ottawa, Ont.	
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.
1	Newton	41	7	40	22	45	1	2	31	12	37	13	91	104	102
2	Canadian Thorpe	38	26	40	23	16	53	6	37	4	38	28	92	103	104
3	Sidney	35	41	38	16	46	32	44	38	27	24	38	30	92	104
4	Danish Chevalier	34	38	39	28	39	20	52	4	31	12	37	30	91	104
5	Victor	34	28	35	40	42	4	45	30	30	20	37	34	92	104
6	Beaver	34	8	34	28	34	8	52	24	28	36	36	40	90	104
7	Pacer	32	41	37	4	46	12	43	26	29	8	37	37	92	104
8	Nepean	31	27	40	40	46	2	47	34	32	44	39	39	92	104
9	Bolton	31	23	37	24	37	4	47	14	28	6	36	14	92	104
10	French Chevalier	24	28	35	40	43	26	53	16	37	4	38	42	93	104
11	Prize Prolific	22	24	34	8	34	38	50	32	24	34	38	94	104	103
12	Thanet	21	17	29	8	42	4	45	10	31	12	33	29	90	104
13	Kinver Chevalier	19	28	32	44	21	12	51	2	40	40	33	6	91	104
14	Monck	18	26	23	36	21	22	37	24	28	16	25	44	98	104
15	Rigid	14	8	21	32	32	24	50	10	27	4	29	6	97	104

The six varieties of two-rowed barley which have given the largest crops at the several experimental farms during 1897 are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

		Per Acre.				Per Acre.	
		Bush.	Lbs.			Bush.	Lbs.
1.	Newton	41	7	4.	Danish Chevalier	34	38
2.	Canadian Thorpe	38	26	5.	Victor	34	28
3.	Sidney	35	41	6.	Beaver	34	8

An average yield of 36 bushels 25 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

		Per Acre.				Per Acre.	
		Bush.	Lbs.			Bush.	Lbs.
1.	Canadian Thorpe	40	40	4.	Danish Chevalier	39	28
2.	Newton	40	40	5.	Sidney	38	16
3.	Nepean	40	40	6.	Bolton	37	24

An average yield of 39 bushels 31 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

		Per Acre.				Per Acre.	
		Bush.	Lbs.			Bush.	Lbs.
1.	Sidney	46	32	4.	French Chevalier	43	26
2.	Pacer	46	12	5.	Victor	42	1
3.	Nepean	46	2	6.	Thanet	42	1

An average yield of 44 bushels 21 lbs. per acre.

EXPERIMENTAL FARM FOR THE N. W. TERRITORIES, INDIAN HEAD, N.W.T.

		Per Acre.				Per Acre.	
		Bush.	Lbs.			Bush.	Lbs.
1.	French Chevalier	53	16	4.	Danish Chevalier	52	4
2.	Canadian Thorpe	53	6	5.	Kinver Chevalier	51	2
3.	Beaver	52	24	6.	Newton	51	2

An average yield of 52 bushels 9 lbs. per acre.

1. Kinver
2. Canadian
3. French

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1. Nepean
2. French
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1. Odessa.
2. Pioneer
3. Mensur
4. Trooper
5. Royal
6. Oderbr
7. Rennie's
8. Stella
9. Success
10. Vangua
11. Petscho
12. Nugent
13. Blue Ba
14. Summit
15. Phoenix
16. Excelsio
17. Champio
18. Common
19. Surprise
20. Baxter

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre. Bush. Lbs.			Per Acre. Bush. Lbs.	
1. Kinver Chevalier.....	40	40	4. Nepean	32	44
2. Canadian Thorpe.....	37	4	5. Prize Prolific.....	32	24
3. French Chevalier.....	37	4	6. Newton	31	12

An average yield of 35 bushels 13 lbs. per acre.

The six varieties of two-rowed barley which have given the largest crops during 1897, taking the average of the results obtained on all the experimental farms are :—

	Per Acre. Bush. Lbs.			Per Acre. Bush. Lbs.	
1. Nepean.....	39	39	4. Canadian Thorpe	38	28
2. French Chevalier.....	38	42	5. Pacer	37	37
3. Sidney	38	30	6. Victor	37	34

An average yield of 38 bushels 27 lbs. per acre.

The average crop of all the varieties of two-rowed barley tested at each of the experimental farms was as follows: At Ottawa, 29 bush. 2 lbs. per acre; Nappan, 34 bush. 41 lbs.; Brandon, 34 bush. 44 lbs.; Indian Head, 48 bush. 16 lbs., and at Agassiz, 31 bush. 27 lbs. The average return given by the whole of the varieties at all the farms was 35 bush. 36 lbs. per acre.

UNIFORM TEST PLOTS OF SIX-ROWED BARLEY.

Number.	Name of Variety.	Yield at the several Experimental Farms, Season of 1897.							Number of Days from Sowing to Harvesting.					
		Ottawa, Ont.		Nappan, N. S.		Brandon, Man.		Indian Head, N. W. T.		Agassiz, B. C.		Average of all Farms.		
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	
1	Odessa.....	54	3 46	12 40	30 68	6 33	36 48	27	87	86	96	99	112	96
2	Pioneer	50	40 44	8 29	8 49	38 36	12 42	2	86	86	103	104	107	97
3	Mensury	49	18 52	4 34	18 66	42 38	16 48	10	90	90	96	99	110	97
4	Trooper	48	41 40	51	12 57	44 32	30 46	6	86	94	96	99	111	97
5	Royal.....	48	6 48	16 25	20 63	36 36	22 44	20	85	85	95	99	107	94
6	Oderbruch	48	6 50	20 34	28 71	2 40	20 48	44	86	90	95	99	102	94
7	Rennie's Impr'vd	46	26 40	40 42	34 68	6 37	24 47	7	85	86	95	100	102	94
8	Stella	45	25 38	36 33	26 58	16 34	8 42	3	84	94	102	99	112	98
9	Success	44	15 34	28 44	38 51	32 32	10 41	25	82	80	89	93	102	89
10	Vanguard.....	44	13 46	32 20	18 66	32 37	24 44	43	84	85	95	99	107	94
11	Petschora.....	43	36 45	20 35	40 70	38	36 46	36	84	84	104	99	102	95
12	Nugent	43	6 39	28 41	2 56	12 35	20 43	4	90	94	96	99	112	98
13	Blue Barley.....	42	34 42	24 27	34 65	40 42	24 44	12	84	88	93	100	112	95
14	Summit.....	41	37 38	36 50	10 55	30 33	24 43	46	86	94	98	99	112	98
15	Phoenix.....	41	11 40	20 39	18 51	12 33	16 41	5	85	85	96	100	102	94
16	Excelsior.....	40	40 37	20 49	8 57	34 30	43	1	85	90	90	100	110	95
17	Champion.....	40	10 37	44 47	34 54	18 33	16 42	34	86	85	90	100	102	93
18	Common.....	40	42	24 43	26 71	12 38	16 47	6	85	90	90	99	111	95
19	Surprise.....	38	12 40	38	46 55	30 33	44 41	16	87	94	99	99	112	98
20	Baxter.....	35	7 37	20 32	34 66	32 32	30 40	44	87	86	97	99	105	95

The six varieties of six-rowed barley which have given the largest crops at the several experimental farms during 1897 are the following:—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Odessa.....	54 3	4. Trooper.....	48 41
2. Pioneer.....	50 40	5. Royal.....	48 6
3. Mensury.....	49 18	6. Oderbruch.....	48 6

An average crop of 49 bushels 43 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Mensury.....	52 4	4. Vanguard.....	46 32
2. Oderbruch.....	50 20	5. Odessa.....	46 12
3. Royal.....	48 16	6. Petschora.....	45 20

An average crop of 48 bushels 9 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Trooper.....	51 12	4. Champion.....	47 34
2. Summit.....	50 10	5. Success.....	44 38
3. Excelsior.....	49 8	6. Common.....	43 26

An average crop of 47 bushels 37 lbs. per acre.

EXPERIMENTAL FARM FOR THE N.W. TERRITORIES, INDIAN HEAD, N.W.T.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Common.....	71 12	4. Odessa.....	68 6
2. Oderbruch.....	71 2	5. Rennie's Improved.....	68 6
3. Petschora.....	70 ..	6. Mensury.....	66 42

An average crop of 69 bushels 11 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Blue Barley.....	42 24	4. Mensury.....	38 16
2. Oderbruch.....	40 20	5. Common.....	38 16
3. Petschora.....	38 36	6. Vanguard.....	37 24

An average crop of 39 bushels 15 lbs. per acre.

The six varieties of six-rowed barley which have given the largest crops during 1897, taking the average of the results obtained on all the experimental farms, are:—

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Oderbruch.....	48 44	4. Rennie's Improved.....	47 7
2. Odessa.....	48 27	5. Common.....	47 6
3. Mensury.....	48 10	6. Petschora.....	46 36

An average crop of 47 bushels 38 lbs. per acre.

The average crop of all the varieties of six-rowed barley tested at each of the experimental farms was as follows: At Ottawa, 44 bush. 17 lbs. per acre; Nappan, 42 bush. 10 lbs.; Brandon, 38 bush. 29 lbs.; Indian Head, 61 bush. 16 lbs., and at Agassiz, 35 bush. 26 lbs. The average return given by the whole of the varieties at all the farms was 44 bush. 22 lbs. per acre.

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1 Wellma
2 White I
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7 Old Rec
8 Huron
9 Advanc
10 White I
11 Hungar
12 Blenhei
13 Preston
14 Dufferin
15 Countes
16 Dawn
17 Rideau
18 Crown
19 Goose
20 Red Fir
21 Pringle
22 Progress
23 Stanley
24 Admira
25 Alpha
26 Vernon
27 Captor
28 Percy
29 Campbe
30 Black S
31 Golden
32 Ladoga
33 Beauty
34 Beaudry
35 Herisson
36 Red Fer
37 Dion's
38 Empori

SPRING WHEAT.

The uniform test plots of spring wheat for 1897 have included thirty-eight varieties. Among these there were seventeen cross-bred sorts which have been produced at the experimental farms. These are Huron, Advance, Blenheim, Preston, Dufferin, Countess, Dawn, Rideau, Crown, Progress, Stanley, Admiral, Alpha, Vernon, Captor, Percy and Beauty. The size of the plots in each case was the same as those of the oats, and the quantity of seed sown was in the proportion of one and one-half bushels per acre. The dates of sowing were the following:—At Ottawa, 29th and 30th April; Nappan, 10th and 11th May; Brandon, 26th April; Indian Head, 24th April, and at Agassiz, 14th April.

UNIFORM TEST PLOTS OF SPRING WHEAT.

Number.	Name of Variety.	Yield of the several Experimental Farms, Season of 1897.										Number of Days from Sowing to Harvesting.													
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.	
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.
1	Wellman's Fife.....	24	55 30	20 32	30 37	50 31	20 31	23	102	108	119	126	125	116											
2	White Fife.....	23	5 18	20 40	30 35	30 29	20 29	21	100	113	115	126	126	116											
3	Colorado.....	22	15 23	20 28	30 25	23 20	24 29	94	107	110	126	126	113												
4	Monarch.....	22	7 23	20 34	35 20	30 40	29 5	102	111	116	125	125	116												
5	Rio Grande.....	22	27 40	27 50	31 40	26 27	2	101	113	111	126	125	115												
6	White Connell..	21	30 28	20 32	40 35	20 31	40 29	54	102	111	119	126	126	117											
7	Old Red River..	21	27 21	26 36	50 29	20 26	55	102	111	114	126	126	116												
8	Huron.....	21	23 20	22 20	37 27	20 26	12	96	111	112	119	126	113												
9	Advance.....	20	40 26	40 30	10 33	50 27	20 27	44	96	106	112	125	125	113											
10	White Russian..	20	35 26	40 36	20 31	50 30	29 5	101	113	115	126	123	116												
11	Hungarian.....	20	20 20	40 30	10 42	23 28	14	98	113	110	119	126	113												
12	Blenheim.....	20	17 21	31 30	30 30	30 27	20 26	7	98	113	112	126	126	115											
13	Preston.....	20	10 26	20 27	10 36	31 28	8	98	106	116	125	121	113												
14	Dufferin.....	19	55 22	40 24	40 29	10 23	20 23	57	95	109	113	125	121	113											
15	Countess.....	19	55 17	24 20	40 20	20 27	20 25	47	95	113	112	119	121	112											
16	Dawn.....	19	55 22	26 35	25 25	35 95	109	109	119	113	109														
17	Rideau.....	19	55 18	40 26	36 10	29 25	57	95	109	115	119	117	111												
18	Crown.....	19	45 22	33 35	40 26	27 17	96	111	110	119	126	112													
19	Goose.....	19	15 26	40 26	30 27	10 28	20 25	35	99	107	116	125	126	115											
20	Red Fife.....	19	15 21	35 20	37 50	29 40	28 37	102	113	115	125	121	115												
21	Pringle's Cham-plain	19	19 31	37 10	27 40	26 46	97	111	115	119	126	114													
22	Progress.....	18	55 18	40 23	37 50	28 25	17 99	113	116	119	126	115													
23	Stanley.....	18	10 25	40 22	30 31	25 40	24 36	98	106	112	122	121	112												
24	Admiral.....	17	30 25	30 30	40 10	28 20	28 18	100	110	115	119	121	113												
25	Alpha.....	17	10 23	20 29	40 37	20 30	27 30	99	106	112	119	121	111												
26	Vernon.....	16	50 23	20 31	10 39	28 20	27 44	101	109	109	125	126	114												
27	Captor.....	16	50 22	22 40	36 30	40 25	38 98	113	116	119	117	113													
28	Percy.....	16	39 17	40 30	40 38	40 27	26 8	98	111	112	119	115	111												
29	Campbell's White Chaff	16	20 20	28 30	32 30	26 40	24 48	100	107	113	126	121	113												
30	Black Sea.....	15	55 21	40 23	30 30	40 27	23 45	96	109	110	119	112	109												
31	Golden Drop.....	15	22 34	10 31	10 27	25 52	96	106	112	126	117	111													
32	Ladoga.....	14	55 18	24 20	28 40	25 20	22 15	96	105	110	128	114	111												
33	Beauty.....	14	35 23	20 22	30 33	20 24	20 23	37	101	113	114	119	112	112											
34	Beaudry.....	14	20 20	29 40	36 10	27 25	26 96	111	110	128	121	113													
35	Herisson Bearded	13	50 22	25 30	39 28	40 25	48 98	109	111	126	125	114													
36	Red Fern.....	12	59 26	40 29	10 38	30 25	40 26	36	101	107	115	125	125	115											
37	Dion's.....	12	50 26	26 20	27 20	26 40	23 50	101	111	115	125	126	116												
38	Emporium.....	10	21 22	40 31	36 40	24 20	25 101	111	116	126	126	116													

The twelve varieties of spring wheat which have given the largest crops at the several experimental farms during 1897 are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Wellman's Fife	24	55	7. Old Red River	21	27
2. White Fife	23	5	8. Huron	21	—
3. Colorado	22	15	9. Advance	20	40
4. Monarch	22	7	10. White Russian	20	35
5. Rio Grande	22	—	11. Hungarian	20	20
6. White Connell	21	30	12. Blenheim	20	17

An average crop of 21 bushels 41 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Wellman's Fife	30	20	7. White Russian	26	40
2. White Connell	28	20	8. Preston	26	20
3. Rio Grande	27	40	9. Dion's	26	—
4. Advance	26	40	10. Stanley	25	40
5. Goose	26	40	11. Admiral	25	—
6. Red Fern	26	40	12. Vernon	23	20

An average crop of 26 bushels 37 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. White Fife	40	30	7. White Connell	32	40
2. White Russian	36	20	8. Wellman's Fife	32	30
3. Red Fife	35	20	9. Blenheim	31	30
4. Golden Drop	34	10	10. Vernon	31	10
5. Monarch	34	—	11. Pringle's Champlain	31	—
6. Crown	33	—	12. Emporium	31	—

An average crop of 33 bushels 36 lbs. per acre.

EXPERIMENTAL FARM FOR THE N. W. TERRITORIES, INDIAN HEAD, N.W.T.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Hungarian	42	—	7. Red Fern	33	30
2. Countess	40	20	8. Wellman's Fife	37	50
3. Admiral	40	10	9. Progress	37	50
4. Vernon	39	—	10. Red Fife	37	50
5. Herisson Bearded	39	—	11. Alpha	37	20
6. Percy	38	40	12. Pringle's Champlain	37	10

An average crop of 38 bushels 48 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. White Connell	31	40	7. White Russian	30	—
2. Wellman's Fife	31	20	8. Red Fife	29	40
3. Preston	31	—	9. White Fife	29	20
4. Captor	30	40	10. Old Red River	29	20
5. Monarch	30	40	11. Rideau	29	—
6. Alpha	30	—	12. Herisson Bearded	28	40

An average crop of 30 bushels 7 lbs. per acre.

The twelve varieties of spring wheat which have given the largest crops, taking the average of the results obtained at all the experimental farms are :—

Per Acre.		Per Acre.	
Bush. Lbs.		Bush. Lbs.	
1. Wellman's Fife.....	31 23	7. Red Fife.....	28 37
2. White Connell.....	29 54	8. Admiral.....	28 18
3. White Fife.....	29 21	9. Hungarian.....	28 14
4. Monarch.....	29 5	10. Preston.....	28 8
5. White Russian.....	29 5	11. Advance.....	27 44
6. Herisson Bearded.....	28 40	12. Vernon.....	27 44

An average crop of 28 bushels 51 lbs. per acre.

The average crop of all the varieties of spring wheat tested at each of the experimental farms was as follows :—At Ottawa, 18 bush. 22 lbs. per acre ; Nappan, 22 bush. 45 lbs. ; Brandon, 28 bush. 44 lbs. ; Indian Head, 34 bush. 47 lbs., and at Agassiz, 27 bush. 35 lbs. The average return given by the whole of the varieties of spring wheat at all the farms was 26 bushels 27 lbs. per acre.

PEASE.

The trial plots of pease during the past season have included forty varieties. Among these there are twenty of the cross-bred sorts which have been originated at the experimental farms. These are Arthur, King, Macoun, Perth, Victoria, Vincent, Carleton, Alma, Agnes, Kent, Duke, Nelson, Paragon, Bedford, Bruce, Bright, Archer, Mackay, Trilby, Prince. These were all sown in plots of one-tenth acre each at Brandon and Indian Head, and one-twentieth acre each at Ottawa, Nappan and Agassiz, and the quantity of seed used per acre has varied from two to three bushels, depending on the size of the pea. The dates of sowing were the following :—At Ottawa, 3rd and 4th May ; Nappan, 16th May ; Brandon, 17th April, Indian Head, 6th May, and at Agassiz, 1st May.

UNIFORM TEST PLOTS OF PEASE.

Number.	Name of Variety.	Yield at the several Experimental Farms, Season of 1897.						Number of Days from Sowing to Harvesting.					
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all the Farms.	
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.
1	Canadian Beauty	31	50	16	30	20	29	27	20	26	54	112	116
2	Oddfellow	30	30	28	40	29	20	27	23	27	42	95	116
3	Arthur	30	20	13	20	29	30	34	10	23	20	27	8
4	Creep	29	40	22	40	36	40	30	50	25	20	29	2
5	King	29	35	31	40	42	40	28	40	31	20	32	47
6	Macoun	27	40	16	40	25	32	20	24	25	8	119	123
7	Prussian Blue	27	20	30	35	24	30	24	40	28	18	100	120
8	Prince Albert	27	5	22	20	32	34	40	26	28	25	117	123
9	Crown	26	50	35	33	40	32	50	13	20	28	20	103
10	Harrison's Glory	26	40	19	20	32	22	21	40	24	20	98	111
11	Early Britain	26	30	50	26	40	28	24	20	31	6	95	109
12	Perth	26	20	31	40	24	40	29	30	23	27	2	108
13	Victoria	26	22	35	20	33	24	28	4	118	123	135	110
14	Vincent	25	50	26	40	26	31	40	28	40	27	46	107
15	Carleton	25	40	20	40	36	40	30	40	23	27	20	107
16	New Potter	25	20	22	34	40	33	20	19	40	27	115	116
17	Alma	25	22	40	40	30	30	20	20	27	42	109	104
18	Agnes	24	45	11	20	32	24	50	14	40	21	31	98
19	Elephant Blue	24	40	24	40	34	25	50	23	20	26	30	97
20	Kent	24	30	15	34	26	30	24	40	24	56	114	120
21	Duke	24	30	26	40	27	28	20	23	40	26	2	111
22	Black Eyed Marrowfat	24	20	16	40	29	20	28	50	16	40	23	10
23	Mummy	23	50	16	40	37	40	28	50	22	25	48	95
24	Nelson	23	45	23	20	26	40	29	40	29	20	26	33
25	Paragon	22	50	16	40	26	40	29	30	22	40	23	40
26	Bedford	22	50	17	20	40	27	20	25	20	26	34	118
27	Chancellor	22	30	34	28	40	23	20	27	36	93	109	115
28	Bruce	21	30	22	20	21	20	27	10	22	40	23	108
29	Multiplier	21	18	40	26	20	30	16	20	22	28	106	120
30	Golden Vine	20	50	16	34	34	10	20	20	25	4	106	116
31	Large White Marrowfat	20	30	20	40	22	40	31	50	24	40	24	4
32	Bright	20	20	26	40	37	20	40	30	20	30	56	117
33	Centennial	20	20	31	40	35	40	35	40	17	40	28	12
34	Archer	20	24	36	34	10	29	40	28	46	106	127	131
35	Mackay	17	40	18	20	35	23	20	17	40	22	24	102
36	Trilby	15	40	22	20	38	20	31	50	20	25	38	118
37	Prince	15	19	20	33	20	27	30	20	22	50	106	120
38	Dan'l O'Rourke	14	11	20	25	20	34	10	16	20	20	14	93
39	White Wonder	9	23	20	34	40	30	10	23	40	24	11	93
40	Pride	7	40	21	40	31	40	29	50	16	20	21	94

The twelve varieties of pease which have given the largest crops at the several experimental farms during 1897, are the following:—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Canadian Beauty	31	50	7. Prussian Blue	27	20
2. Oddfellow	30	30	8. Prince Albert	27	5
3. Arthur	30	20	9. Crown	26	50
4. Creep	29	40	10. Harrison's Glory	26	40
5. King	29	35	11. Early Britain	26	30
6. Macoun	27	40	12. Perth	26	20

An average crop of 28 bushels 22 lbs. per acre.

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EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Early Britain	50	..	7. Prussian Blue.....	30	..
2. Crown	35	..	8. Oddfellow	28	40
3. Perth	31	40	9. Bright.....	26	40
4. Centennial	31	40	10. Duke.....	26	40
5. King	31	40	11. Vincent	26	40
6. Chancellor.....	30	..	12. Elephant Blue.....	24	40

An average crop of 31 bushels 7 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. King	42	40	7. Carleton	36	40
2. Alma.....	40	40	8. Creeper.....	36	40
3. Bedford	40	..	9. Archer	36	..
4. Trilby	38	20	10. Centennial.....	35	40
5. Mummy.....	37	40	11. Victoria	35	20
6. Bright.....	37	20	12. Mackay	35	..

An average crop of 37 bushels 40 lbs. per acre.

EXPERIMENTAL FARM FOR THE N.W. TERRITORIES, INDIAN HEAD, N.W.T.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Bright.....	40	..	7. New Potter	33	20
2. Centennial.....	35	40	8. Victoria	33	..
3. Prince Albert.....	34	40	9. Crown	32	50
4. Golden Vine.....	34	10	10. Macoun	32	20
5. Daniel O'Rourke.....	34	10	11. Large White Marrowfat	31	50
6. Arthur	34	10	12. Trilby	31	50

An average crop of 34 bushels per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. King	31	20	7. Canadian Beauty	27	20
2. Bright.....	30	20	8. Prince Albert.....	26	..
3. Archer.....	29	40	9. Creeper.....	25	20
4. Nelson.....	29	20	10. Bedford	25	20
5. Vincent.....	28	40	11. Prussian Blue.....	24	40
6. Arthur	28	20	12. Kent	24	40

An average crop of 27 bushels 35 lbs. per acre.

The twelve varieties which have given the largest crops, taking the average results obtained at all the experimental farms are the following:—

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. King.....	32	47	7. Crown.....	28	20
2. Early Britain	31	6	8. Prussian Blue.....	28	18
3. Bright	30	56	9. Centennial.....	28	12
4. Creeper.....	29	2	10. Victoria.....	28	4
5. Archer	28	46	11. Vincent.....	27	46
6. Prince Albert.....	28	25	12. Alma.....	27	42

An average crop of 29 bushels 7 lbs. per acre.

The average crop of all the varieties of pease tested at each of the experimental farms was as follows:—At Ottawa, 23 bush. 15 lbs. per acre; Nappan, 22 bush. 38 lbs.; Brandon, 31 bush. 53 lbs.; Indian Head, 30 bush. 4 lbs., and at Agassiz, 22 bush. 44 lbs. The average return given by the whole of the varieties at all the farms is 26 bushels 7 lbs. per acre.

INDIAN CORN.

Twenty-four varieties of Indian corn have been under trial during 1897, all planted on uniform soil in rows three feet apart and the plants thinned out to six or eight inches apart in the row. The dates of planting were the following:—At Ottawa, 25th May; Nappan, 4th June; Brandon, 19th May; Indian Head, 19th May, and at Agassiz, from 18th May to 1st June. All were cut green and put into the silo for the winter feeding of stock. The dates of cutting were:—At Ottawa, 17th September; Nappan, 3rd October; Brandon, 28th August; Indian Head, 4th September, and at Agassiz, 28th September. The yield per acre has been calculated in each case from the weight obtained from two rows each 66 feet long.

UNIFORM TEST PLOTS OF INDIAN CORN.

Number.	Name of Variety.	Yield at the Several Experimental Farms—Season of 1897.					
		Ottawa, Ont.	Nappan, Ont.	Brandon, Manitoba.	Indian Head, N. W. T.	Agassiz, B. C.	Average of all farms.
		Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.
1	Selected Leaming....	36 1,260 13	400 13	400 10	1,450 43	900 23	882
2	Giant Prolific Ensilage	36 1,062 4	250 13	400 16	450 32	350 20	902
3	Cloud's Early Yellow	32 416 9	1,470 16	1,000 14	50 24	400 19	667
4	Red Cob Ensilage....	30 1,512 13	500 16	100 12	1,300 43	900 23	462
5	Cuban Giant.....	26 800 8	1,270 17	1,200 15	250 42	700 22	44
6	Rural Thoroughbred White Flint.....	26 767 6	870 16	100 8	1,600 29	300 17	727
7	Champion White Pearl.....	25 556 11	..... 19	1,600 11	1,650 27	780 19	117
8	North Dakota White.	25 292 7	1,400 11	.....	34	200 19	973
9	Mamm. 8 rowed Flint	24 708 13	400 16	1,000 12	1,200 35	950 20	582
10	Ninety-day.....	23 992 5	340 11	1,760 11	1,650 29	1,400 16	828
11	Longfellow.....	22 1,870 11	550 11	1,100 12	200 19	610 15	866
12	Pride of the North...	22 1,804 6	870 11	..... 13	950 14	1,810 13	1,487
13	North Dakota Yellow	22 165 5	1,000 11	..... 12	750 16	780 13	939
14	Early Butler.....	21 1,296 6	1,970 18	1,400 13	1,170 37	800 19	1,327
15	Sanford.....	21 1,164 11	440 9	1,800 15	1,900 22	..... 16	261
16	Extra Ey Huron Dent	20 1,976 6	870 12	1,300 11	900	..... 12	1,761
17	Compton's Early....	20 1,976 10	460 14	1,700 11	1,870 18	1,840 15	769
18	Angel of Midnight...	20 1,580 10	249 19	1,600 10	900 33	..... 18	1,664
19	White Cap Yellow Dent.....	19 1,290 9	150 15	1,800 11	1,100 20	800 15	628
20	Canada White Flint.	18 1,818 9	1,800 10	900 12	1,850 17	1,860 14	46
21	King of the Earliest	17 980 9	700 14	600 11	..... 31	700 16	1,396
22	Pearce's Prolific....	17 848 6	870 9	700 12	200 28	100 14	1,344
23	Mitchell's Extra Early	16 736 4	800 13	400 12	1,300 14	50 12	257
24	Mamm. Sweet Fodder	13 1,720	.....	.....	26	800 20	260

The test of varieties in this case was not quite complete. The Mammoth Sweet Fodder was omitted at Nappan, Brandon and Indian Head. The North Dakota White was also omitted at Indian Head and the Extra Early Huron Dent at Agassiz for the reason that the seed did not arrive in time for planting.

The six varieties of Indian corn which have given the heaviest crops at the several experimental farms during 1897, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Selected Leaming	36 1260	4. Red Cob Ensilage.....	30 1512
2. Giant Prolific Ensilage.....	36 1062	5. Cuban Giant.....	26 800
3. Cloud's Early Yellow.....	32 416	6. Thoroughbred White Flint..	26 767

An average crop of 31 tons 969 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Compton's Early	11 1100	4. Early Butler.....	10 1670
2. Sanford.....	11 440	5. Angel of Midnight	10 1450
3. Longfellow.....	11	6. Cloud's Early Yellow	10 1340

An average crop of 11 tons per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Champion White Pearl.....	19 1600	4. Cuban Giant.....	17 1200
2. Angel of Midnight	19 1600	5. Mammoth 8-rowed Flint	16 1000
3. Early Butler.....	18 1400	6. Cloud's Early Yellow	16 1000

An average crop of 18 tons 300 lbs. per acre.

EXPERIMENTAL FARM FOR THE N.W. TERRITORIES, INDIAN HEAD, N.W.T.

	Per acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Giant Prolific Ensilage	16 450	4. Cloud's Early Yellow	14 50
2. Sanford	15 1900	5. Early Butler	13 1170
3. Cuban Giant.....	15 350	6. Pride of the North.....	13 950

An average crop of 14 tons 1,478 lbs per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Red Cob Ensilage.....	43 900	4. Early Butler	37 800
2. Selected Leaming	43 900	5. Mammoth 8-rowed Flint.....	35 950
3. Cuban Giant.....	42 700	6. North Dakota White.....	34 200

An average crop of 39 tons 741 lbs. per acre.

The six varieties of Indian corn which have given the heaviest crops, taking the average of the results obtained at all the experimental farms are the following :—

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Selected Leaming	23 882	4. Giant Prolific Ensilage	20 902
2. Red Cob Ensilage.....	23 462	5. Mammoth 8-rowed Flint.....	20 582
3. Cuban Giant.....	22 44	6. Mammoth Sweet Fodder.....	20 260

An average crop of 21 tons 1,189 lbs. per acre.

In considering the weights obtained from the varieties named in this last list, it must be borne in mind that most of the very large growing sorts are very late in ripening, and that the fodder they produce is immature and in-

ferior in quality. Hence the most productive of the earlier ripening sorts should be selected in preference, as producing the most nutritious food.

The average weight cut green of all the varieties of Indian corn tested at each of the experimental farms was as follows:—At Ottawa, 23 tons, 1,066 lbs. ; Nappan, 8 tons, 1,394 lbs. ; Brandon, 14 tons, 211 lbs. ; Indian Head, 12 tons, 1,031 lbs., and at Agassiz, 27 tons, 1,784 lbs. The average return given by the whole of the varieties at all the farms was 17 tons 693 lbs.

TURNIPS.

Eighteen varieties of turnips have been under test during 1897, sown on drills or on the flat in rows from 2 to 2½ feet apart. Two sowings were made at each farm, one sowing two weeks later than the other. The dates of sowing will be found in the accompanying table, the dates on which the roots were pulled were the following:—At Ottawa, 13th and 14th October; Nappan, 14th and 18th October; Brandon, 1st October; Indian Head, 5th October, and at Agassiz, 18th October. The yield per acre in each case has been calculated from the weight of roots gathered from two rows each, 66 feet long.

UNIFORM TEST PLOTS OF TURNIPS.

Number.	Name of Variety.	Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.	
		Sown May 8.	Sown May 21.	Sown June 4.	Sown June 18.	Sown May 20.	Sown June 3.	Sown May 18.	Sown May 28.	Sown May 14.	Sown May 28.	First Sowing.	Second Sowing.
		Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.
1	Shamrock Purple Top...	44	1,100/27	1,770/37	480/33	120/9	1,800/8	1,424/8	596/10	460/40	520/40	960/28	1,499/24
2	Selected Purple Top...	44	770/26	965/29	520/25	1,060/4	712/11	440/7	520/9	348/9	48/47	600/28	914/23
3	Perfection Swede...	42	1,965/25	1,313/31	1,080/31	1,840/7	1,576/9	744/7	1,018/10	64/49	208/50	1,576/27	1,575/25
4	Giant King...	41	5/30	885/24	640/21	560/8	1,688/7	1,576/3	468/7	388/53	1,712/47	840/26	303/22
5	Marquis of Lorne...	40	1,510/26	1,845/26	1,960/24	360/9	1,008/6	1,992/6	672/6	1,800/52	1,300/52	1,600/27	902/23
6	Junbo or Monarch...	40	905/28	925/24	360/19	700/8	1,424/8	632/6	400/8	806/54	1,120/51	1,400/26	1,642/23
7	Prize Winner...	40	850/26	855/25	1,060/23	1,880/9	216/10	836/6	1,332/7	1,180/66	1,555/49	1,000/29	1,403/23
8	Manmoth Clyde...	39	1,915/28	815/25	1,820/24	780/10	328/6	1,240/4	1,504/6	1,461/50	760/44	880/26	465/22
9	Carter's Elephant...	38	1,220/34	1,300/27	1,380/19	1,520/8	1,372/7	520/5	1,332/7	1,312/53	1,712/47	840/26	1,923/23
10	East Lothian...	38	230/30	445/30	800/24	360/9	480/9	1,536/8	408/7	1,576/56	1,108/60	384/28	217/26
11	Prize Purple Top...	36	1,975/24	510/26	1,960/22	840/9	1,736/8	1,160/4	1,372/10	1,648/58	1,040/53	1,600/27	177/24
12	Hall's Westbury...	36	1,590/26	910/25	1,060/26	1,960/17	1,232/8	1,952/9	1,424/10	298/53	40/48	1,504/27	269/24
13	Hartley's Bronze...	36	765/27	780/32	600/28	1,760/8	806/8	1,952/9	1,518/10	856/55	880/50	1,376/28	198/25
14	Skirving's...	36	600/28	1,915/31	320/20	1,180/8	1,952/8	1,160/6	1,464/9	1,932/55	49	1,294/27	1,298/23
15	Sutton's Champion...	35	1,280/22	55/25	1,820/24	1,540/8	682/9	1,800/7	256/8	1,820/45	200/42	1,200/24	857/21
16	Halewood's Bronze Top...	35	345/24	235/36	200/25	1,820/11	440/8	1,424/4	316/8	1,160/56	200/51	80/28	1,100/23
17	Bangholm Selected...	34	1,300/27	800/28	1,760/24	780/9	216/8	1,424/4	1,768/6	1,464/47	600/46	840/24	1,320/22
18	Champion Purple Top...	32	1,365/27	1,110/28	240/24	1,540/7	1,048/6	1,728/7	256/8	1,820/47	600/44	200/24	1,108/22

The crops from the successive growths of turnips at the experimental farms have averaged as follows :

	Tons.	Lbs.
Central Experimental Farm, first sowing	38	1,318
do do second sowing	27	862
Experimental Farm, Nappan, first sowing	28	1,550
do do second sowing	24	1,562
Experimental Farm, Brandon, Man., first sowing	8	1,952
Experimental Farm, Brandon, Man., second sowing	8	1,199
Experimental Farm, Indian Head, N.W.T., first sowing	6	817
do do second sowing	8	1,362
Experimental Farm, Agassiz, first sowing	52	1,885
do do second sowing	49	259

Average crop from all the plots at all the farms, first sowing, 27 tons 326 lbs. ; second sowing, 23 tons 1,456 lbs.

It will be seen by reference to the table that the first sowing of turnips at each of the experimental farms, has given the larger crop excepting at Indian Head. The average of all the sowings at all the farms show 3 tons 1,871 lbs. per acre more from the first sowing than from the second.

The six varieties of turnips which have given the heaviest crops at the several experimental farms during the season of 1897, are the following. Where not otherwise stated the quantities given are all from the early sown plots:

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Shamrock Purple Top.	41 1,100	4. Giant King.	41 5
2. Selected Purple Top.	44 770	5. Marquis of Lorne.	40 1,510
3. Perfection Swede.	42 1,965	6. Jumbo or Monarch.	40 905

An average crop of 42 tons 709 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Shamrock Purple Top.	37 480	4. Perfection Swede, 2nd sowing	31 1,840
2. Halewood's Bronze Top.	36 200	5. Skirvings.	31 320
3. Hartley's Bronze.	32 600	6. East Lothian.	30 900

An average crop of 33 tons 373 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Hall's Westbury.	11 1,232	4. Shamrock Purple Top.	9 1,800
2. Halewood's Bronze Top.	11 440	5. Prize Purple Top.	9 1,536
3. Mammoth Clyde.	10 328	6. Marquis of Lorne.	9 1,008

An average crop of 10 tons 724 lbs. per acre.

EXPERIMENTAL FARM FOR THE N.W. TERRITORIES, INDIAN HEAD, N.W.T.

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Prize Purple Top, 2nd sowing.	10 1,648	4. Hall's Westbury, 2nd sowing.	10 268
2. Hartley's Bronze, 2nd sowing.	10 856	5. Perfection Swede, 2nd sowing.	10 64
3. Shamrock Purple Top, 2nd sowing.	10 460	6. Skirvings, 2nd sowing.	9 1,932

An average crop of 10 tons 538 lbs per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Prize Winner.	66 1,555	4. Selected Purple Top.	57 48
2. East Lothian, 2nd sowing.	60 384	5. Halewood's Bronze Top.	56 200
3. Prize Purple Top, 2nd sowing.	58 1,040	6. Hartley's Bronze.	55 880

An average crop of 59 tons 18 lbs. per acre.

The six varieties of turnips which have produced the heaviest crops, taking the average of the results obtained at all the experimental farms, are the following :—

	Per Acre.			Per Acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Prize Winner	29	1,403	4. Hartley's Bronze Top.....	28	938
2. Shamrock Purple Top	28	1,999	5. Selected Purple Top.....	28	914
3. Halewood's Bronze Top.....	28	1,100	6. East Lothian	28	217

An average crop of 28 tons 1,428 lbs. per acre.

MANGELS.

Eighteen varieties of mangels were under trial in 1897, all sown on drills or on the flat from 2 to 2½ feet apart. Two sowings were made at each farm, the second sowing, two weeks later than the first. The dates of sowing will be found in the accompanying table, the dates on which the roots were pulled were the following :—At Ottawa, 11th October; Nappan, 14th and 15th October; Brandon, 30th September; Indian Head, 4th October; and at Agassiz, 15th October. The yield per acre in each case has been calculated from the weight of roots gathered from two rows each 66 feet long.

UNIFORM TEST PLOTS OF MANGELS.

Number.	Name of Variety.	Ottawa, Ont.		Nappan, N. S.		Brandon, Man.		Indian Head, N. W. T.		Agassiz, B. C.		Average of all Farms.		
		Sown May 8	Sown May 21	Sown June 4	Sown June 18	Sown May 20	Sown June 3	Sown May 18	Sown May 28	Sown April 24	Sown May 8	First Sowing.	Second Sowing.	
		Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	
1	Giant Yellow Intermediate (Steele).....	46	1,060 37	305 34	400 23	1,880 22	352 16	1,000 10	1,120 13	1,852 34	1,080 31	40 29	1,202 24	1,015
2	Gate Post.....	44	1,815 35	1,335 26	1,200 17	960 14	776 20	1,28 12	420 13	1,984 34	992 36	160 26	1,041 24	1,313
3	Canadian Giant.....	40	1,345 28	1,420 28	1,000 20	1,040 21	32 20	1,184 7	388 11	1,76 35	752 38	1,200 26	1,103 21	1,904
4	Golden Tankard.....	35	950 22	605 25	1,000 19	1,520 17	584 14	1,832 8	1,820 12	684 27	912 26	360 22	1,863 19	2,000
5	Mammoth Long Red.....	34	1,960 28	485 27	1,480 23	1,100 15	1,680 18	696 10	1,780 13	268 32	1,824 30	1,600 24	945 22	1,630
6	Champion Yellow Globe.....	34	1,630 22	605 26	1,200 23	1,100 26	8 15	96 10	1,912 12	1,476 27	1,000 25	630 25	350 19	1,587
7	Selected Mamm. Long Red.....	34	845 23	1,850 .....	.....	.....	464 26	1,398 10	1,120 12	1,470 39	1,024 32	240 26	1,803 23	1,722
8	Yellow Intermediate.....	33	715 21	1,500 29	1,280 21	1,320 6	672 17	56 10	1,912 15	1,944 31	1,184 27	1,000 22	753 20	1,576
9	Red Fleshed Tankard.....	32	1,010 28	815 25	300 14	880 11	176 6	144 6	1,728 8	92 39	320 35	400 22	1,907 18	866
10	Red Fleshed Globe.....	32	405 23	365 21	500 22	80 20	392 13	1,384 9	216 10	460 24	1,280 24	400 21	971 18	1,458
11	Giant Yellow Globe.....	31	1,855 26	1,790 29	1,280 23	340 19	808 15	1,944 11	1,628 13	1,324 27	1,264 25	600 24	167 21	.....
12	Prize Mamm. Long Red.....	31	1,690 25	655 27	720 21	1,320 25	424 15	1,944 10	1,120 12	1,476 29	1,136 33	1,900 24	1,818 19	1,871
13	Golden Fleshed Tankard.....	30	1,050 21	240 26	1,200 18	1,240 13	400 11	1,760 9	1,404 13	1,852 39	1,140 35	400 23	1,830 20	2,068
14	Warden Orange Globe.....	29	1,730 27	835 24	1,540 23	340 14	1,832 12	816 8	896 11	1,628 19	1,424 18	80 19	1,084 18	1,140
15	Giant Yellow Half Long.....	29	740 19	1,705 33	840 25	300 15	1,994 18	112 10	1,912 14	1,568 31	1,360 28	672 24	569 21	483
16	Ward's Large Oval Shaped.....	28	155 19	280 30	19	1,520 18	1,488 19	1,386 9	480 13	268 28	496 22	1,700 22	1,724 18	1,833
17	Giant Yellow Intermediate (Pearce).....	25	1,535 16	395 .....	.....	.....	.....	9	216 13	664 27	912 26	624 20	1,554 18	1,228
18	Norrbton Giant.....	19	1,325 10	136 34	400 23	360 20	1,976 23	1,256 11	1,760 12	420 35	1,456 34	1,900 24	983 20	1,625

Selected Mammoth Long Red and Giant Yellow Intermediate were omitted at Nappan, and Giant Yellow Intermediate at Brandon. The crops from the successive sowings of Mangels at the experimental farms have averaged as follows:

	Tons. Lbs.	Tons. Lbs.
Central Experimental Farm, Ottawa, Ont., first sowing.....	33	323
do do second sowing.....	24	635
Experimental Farm, Nappan, N. S., first sowing.....	28	404
do do second sowing.....	21	706
do do first sowing.....	18	3
Brandon, Man., first sowing.....	18	3
Average crop from all the plots at all the farms: First sowing, 24 tons 208 lbs.; second sowing, 20 tons 1,756 lbs.		

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In the case of the mangels also, the early sown plots have given the larger crops. Taking the earlier sowings at all the experimental farms, they have given an average of 3 tons, 1,452 lbs. per acre more than that obtained from the later sowings.

The six varieties of mangels which have given the heaviest crops at the several experimental farms during 1897 are the following. Where not otherwise stated the quantities given are all from the early sown plots :

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Per Acre.			Per Acre.		
Tons. Lbs.			Tons. Lbs.		
1. Giant Yellow Intermediate.	46	1,060	4. Golden Tankard.....	35	950
2. Gate Post.....	44	1,815	5. Mamm. Long Red	34	1,960
3. Canadian Giant.....	40	1,345	6. Champion Yellow Globe....	34	1,630

An average crop of 39 tons 1,127 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

Per Acre.			Per Acre.		
Tons. Lbs.			Tons. Lbs.		
1. Giant Yellow Intermediate.	34	400	4. Ward's Large Oval-shaped...	30	
2. Norbiton Giant.....	34	400	5. Yellow Intermediate.....	29	1,280
3. Giant Yellow Half Long....	33	840	6. Giant Yellow Globe.....	29	1,280

An average crop of 31 tons 1,700 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per Acre.			Per Acre.		
Tons. Lbs.			Tons. Lbs.		
1. Champion Yellow Globe....	26	8	4. Canadian Giant.....	21	32
2. Prize Mamm. Long Red ...	25	424	5. Norbiton Giant.	20	1,976
3. Giant Yellow Intermediate.	22	352	6. Red Fleshed Globe.....	20	352

An average crop of 22 tons 1,157 lbs. per acre.

EXPERIMENTAL FARM FOR THE N.W. TERRITORIES, INDIAN HEAD, N.W.T.

Per Acre.			Per Acre.		
Tons. Lbs.			Tons. Lbs.		
1. Yellow Intermediate, 2nd sowing	15	1,944	4. Giant Yellow Globe, 2nd sowing.....	13	1,324
2. Gate Post, 2nd sowing ...	13	1,984	5. Prize Mamm. Long Red, 2nd sowing.....	13	268
3. Golden Fleshed Tankard, 2nd sowing	13	1,852	6. Mamm. Long Red, 2nd sowing 13		268

An average crop of 13 tons 1,540 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

Per Acre.			Per Acre.		
Tons. Lbs.			Tons. Lbs.		
1. Selected Mamm. Long Red..	39	1,024	4. Gate Post, 2nd sowing.....	36	160
2. Red Fleshed Tankard.....	39	320	5. Norbiton Giant.....	35	1,456
3. Golden Fleshed Tankard....	39	140	6. Canadian Giant.....	35	752

An average crop of 37 tons 975 lbs. per acre.

The six varieties of mangels which have produced the heaviest crops, taking the average of the results obtained at all the experimental farms are the following :

	Per Acre.			Per Acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Giant Yellow Intermediate.	29	1,202	4. Gate Post.	26	1,041
2. Selected Mamm. Long Red.	26	1,863	5. Champion Yellow Globe.	25	350
3. Canadian Giant.	26	1,103	6. Prize Mamm. Long Red.	24	1,818

An average crop of 26 tons 1,229 lbs. per acre.

CARROTS.

Fifteen varieties of carrots were under test during 1897. all sown in drills or on the flat from $1\frac{1}{2}$ to 2 feet apart. Two sowings were made in each case, the second sowing about two weeks after the first. The dates of sowing will be found in the accompanying table ; the dates on which the roots were pulled were the following :—At Ottawa, 11th October ; Nappan, 14th and 15th October ; Brandon, 30th September ; Indian Head, 6th October ; and at Agassiz, 15th October. The yield per acre in each case has been calculated from the weight of roots gathered from two rows, each 66 feet long.

UNIFORM TEST PLOTS OF CARROTS.

Name of Variety.	Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, B.C.	Average of all the Farms.

UNIFORM TEST PLOTS OF CARROTS.

Number.	Name of Variety.	Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all the Farms.	
		Sown May 8.	Sown May 21.	Sown June 4.	Sown June 18.	Sown May 20.	Sown June 3.	Sown May 14.	Sown May 27.	Sown April 23.	Sown May 7.	First Sowing.	Second Sowing.
		Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.
1	Mam. White Intermediate	24	180 19	445 16	1,440 14	100 3	600 3	1,480 3	1,128 3	1,128 26	800 13	1,440 14	1,630 11
2	Green Top White Orthe	23	1,850 20	45 18	1,240 12	320 4	300 3	600 3	600 2	1,016 33	880 26	1,440 16	1,386 12
3	Giant White Vosges	23	200 19	940 21	1,560 16	680 3	600 5	1,440 2	1,544 3	1,392 37	1,680 46	200 17	1,317 18
4	Iverson's Champion	21	1,230 16	1,000 21	1,320 13	580 3	600 5	1,000 3	396 4	448 27	1,200 36	1,000 15	833 15
5	Improved Short White	21	570 21	240 17	960 16	680 1	1,080 3	1,600 3	1,524 3	468 33	1,467 30	1,802 15	1,126 15
6	Half Long White	20	1,305 17	980 16	680 12	1,840 2	1,240 4	1,240 3	204 3	861 31	87 22	1,760 14	1,423 12
7	Half Long Chautauway	19	1,270 14	1,810 17	960 12	320 2	400 2	400 3	72 3	1,524 26	1,960 24	688 13	1,732 11
8	Guerande or Ox Heart	19	5 12	475 16	1,440 11	40 1	640 2	400 3	600 3	204 27	1,500 20	480 13	1,249 9
9	Early Gem	18	1,345 14	1,755 13	1,360 14	100 2	840 3	1,480 2	1,412 2	1,808 30	1,600 29	1,840 13	1,311 13
10	White Belgian	18	740 15	1,680 13	1,360 10	1,280 2	1,730 3	1,600 3	852 3	1,392 39	1,600 23	53 13	1,654 11
11	Yellow Intermediate	17	45 15	135 16	1,440 8	1,280 2	400 3	1,920 2	1,016 2	1,676 39	1,200 27	297 15	1,220 11
12	Carver's Orange Giant	13	400 10	1,505 9	1,000 7	1,760 1	640 2	1,280 2	1,016 3	72 31	1,360 23	1,040 11	1,283 9
13	Long Orange or Surrey	11	1,365 10	625 9	240 7	1,520 3	160 2	752 2	620 18	760 21	240 8	1,373 8	1,881
14	Scarlet Intermediate	9	1,140 7	1,510 11	803 7	1,520 3	1,920 3	1,016 2	356 11	880 13	1,280 7	671 6	1,853
15	Long Scarlet Altringham	8	1,490 8	1,380 9	1,000 8	520 —	1,760 3	160 1	1,960 1	1,070 19	1,600 17	1,787 8	1,785

The crops from the successive sowings of carrots at the experimental farms have averaged as follows:—

Central Experimental Farm, Ottawa, Ont., first sowing	18 tons	91 lbs.	Experimental Farm, Indian Head, N.W.T., first sowing	2 tons	1,913 lbs.
do do second sowing	14 do	1,909 do	do do second sowing	3 do	136 do
Experimental Farm, Nappan, N.S., first sowing	15 do	1,653 do	Agassiz, B.C., first sowing	28 do	904 do
do do second sowing	11 do	1,024 do	do second sowing	25 do	722 do
Brandon, Man., first sowing	2 do	635 do	Average crop from all the farms, first sowing	13 do	839 do
do do second sowing	3 do	1,187 do	do second sowing	11 do	1,386 do

The carrots have also given the larger crops from the early sown plots. Taking the average yield of the carrot plots on all the farms, the crops from the early sowings have exceeded those from the plots sown later by 1 ton 1,443 lbs. per acre.

The six varieties of carrots which have produced the heaviest crops at the several experimental farms are the following. Unless otherwise stated the yields given are all from the earliest sown plots:—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Mamm. White Intermediate.	24 180	4. Iverson's Champion	21 1,230
2. Green Top White Orthe.....	23 1,850	5. Improved Short White.....	21 570
3. Giant White Vosges.....	23 200	6. Half-long White	20 1,395

An average crop of 22 tons, 889 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Iverson's Champion.....	21 1,320	4. Half-long Chantenay.....	17 960
2. Giant White Vosges.....	21 560	5. Improved Short White.....	17 960
3. Green Top White Orthe.....	18 1,820	6. Yellow Intermediate.....	16 1,440

An average crop of 18 tons 1,843 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Giant White Vosges, 2nd sowing.....	5 1440	4. White Green Top Orthe.....	4 360
2. Iverson's Champion, 2nd sowing.....	5 1,000	5. Yellow Intermediate, 2nd sowing.....	3 1,920
3. Half-long White, 2nd sowing.....	4 1,240	6. Scarlet Intermediate, 2nd sowing.....	3 1,920

An average crop of 4 tons 1,313 lbs. per acre.

EXPERIMENTAL FARM FOR THE N.W. TERRITORIES, INDIAN HEAD, N.W.T.

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Iverson's Champion, 2nd sowing.....	4 448	4. Giant White Vosges, 2nd sowing.....	3 1,392
2. Improved Short White.....	3 1,524	5. White Belgian, 2nd sowing..	3 1,392
3. Half-long Chantenay, 2nd sowing.....	3 1,524	6. Mamm. White Intermediate.	3 1,128

An average crop of 3 tons 1,568 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Giant White Vosges, 2nd sowing.....	46 200	4. Improved Short White.....	33 1,467
2. Yellow Intermediate.....	39 1,250	5. Green Top White Orthe.....	33 880
3. Iverson's Champion, 2nd sowing.....	36 1,660	6. Carter's Orange Giant....	31 1,360

An average crop of 36 tons 1,688 lbs. per acre.

The six varieties of carrots which have produced the heaviest crops, taking the average of the results obtained at all the experimental farms, are :—

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Giant White Vosges.....	18 490	4. Improved Short White	15 1,120
2. Green Top White Orthe.....	16 1,386	5. Iverson's Champion.....	15 853
3. Yellow Intermediate	15 1,220	6. Mamm. White Intermediate.	14 1,630

An average crop of 16 tons 115 lbs. per acre.

SUGAR BEETS.

Five varieties of sugar beets have been tested during 1897, sown in drills or on the flat from 2 to 2½ feet apart. Two sowings were made in each case, the second sowing about two weeks after the first. The dates of sowing will be found in the accompanying table; the dates on which the roots were pulled were the following :—At Ottawa, 11th October; Nappan, 14th and 15th October; Brandon, 30th September; Indian Head, 4th October; and at Agassiz, 15th October. The yield per acre in each instance has been calculated from the weight of roots gathered from two rows, each 66 feet long.

The four varieties of sugar beets which have produced the heaviest crops at the several experimental farms during 1897, are the following—where not otherwise stated the crops grown are from the first sowing :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Improved Imperial.....	23 90	5. Danish Improved.....	19 5
2. Danish Red Top.....	20 1,745	4. Red Top Sugar.....	18 1,620

An average crop of 20 tons 865 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Danish Improved.....	22 1,600	3. Wanzleben.....	22 840
2. Red Top Sugar.....	22 1,600	4. Improved Imperial.....	20 1,040

An average crop of 22 tons 270 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Red Top Sugar.....	20 1,184	3. Danish Improved, 2nd sowing	20 392
2. Vilmorin's Improved..	20 656	4. Improved Imperial.....	15 1,680

An average crop of 19 tons 478 lbs. per acre.

EXPERIMENTAL FARM FOR THE N.W. TERRITORIES, INDIAN HEAD, N.W.T.

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Red Top Sugar, 2nd sowing.	12 1,740	3. Danish Improved, 2nd sowing	11 308
2. Wanzleben " "	11 704	4. Improved Imperial	9 1,140

An average crop of 11 tons 473 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Red Top Sugar, 2nd sowing.	15 800	3. Danish Improved.....	14 952
2. Wanzleben " "	14 1,040	4. Improved Imperial.....	13 1,720

An average crop of 14 tons 1,128 lbs. per acre.

The four varieties of sugar beets which have produced the heaviest crops taking the average of the results obtained at all the experimental farms are the following :—

	Per Acre. Tons. Lbs.		Per Acre. Tons. Lbs.
1. Red Top Sugar	16 1,857	3. Danish Improved.....	16 147
2. Improved Imperial.....	16 1,134	4. Wanzleben.....	14 1,941

An average of 16 tons 270 lbs. per acre.

POTATOES.

Ninety-eight varieties of potatoes have been under trial in uniform test plots during 1897. The potatoes for planting were cut into pieces with two or three eyes in each, and these were planted in rows 26 to 30 inches apart, the sets being placed a foot apart in the rows. The dates of planting

and digging were the following:—At Ottawa, planted 21st and 22nd May, dug from 4th to 7th October; Nappan, planted 25th May, dug 1st to 11th October; Brandon, planted 21st May, dug 29th September; Indian Head, planted 17th May, dug 4th October; and at Agassiz, planted 4th to 28th May, and dug 18th to 25th September. The yield per acre has been calculated in each case from the weight of tubers gathered from two rows, each 66 feet long.

UNIFORM TEST PLOTS OF POTATOES.

Number.	Name of Variety.	YIELDS AT THE SEVERAL EXPERIMENTAL FARMS, SEASON OF 1897.						
		Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, B.C.	Average of all the Farms.	
		Bush. Lbs	Bush. Lbs	Bush. Lbs	Bush. Lbs	Bush. Lbs	Bush. Lbs	Bush. Lbs
1	Holborn Abundance.	402 36	412 30	73 20	255 12	418 ..	312 20	312 20
2	Seedling No. 230	400 24	390 ..	183 20	314 16	355 40	328 44	328 44
3	Seedling No. 7	381 42	400 ..	220 ..	292 36	535 20	365 55	365 55
4	Irish Daisy	372 54	277 30	.....	262 ..	591 36	376 ..	376 ..
5	Chicago Market	356 24	245 ..	238 20	.....	360 10	299 58	299 58
6	Deer's Standard	346 38	290 ..	242 ..	266 12	419 48	312 56	312 56
7	Earliest of All	346 30	240 ..	179 40	.....	319 44	271 28	271 28
8	Northern Spy	346 30	300 ..	187 ..	530 24	408 18	354 26	354 26
9	Rose No. 9	338 48	.....	121 ..	127 36	513 20	275 11	275 11
10	Reeve's Rose	336 36	315 ..	341 ..	231 ..	481 4	340 56	340 56
11	Vanier	333 18	255 ..	176 ..	173 48	506 ..	288 49	288 49
12	Daisy	332 37	275 ..	51 20	217 48	293 20	234 1	234 1
13	Irish Cobbler	321 12	317 30	231 ..	156 12	305 4	266 12	266 12
14	Flemish Beauty Seed-ling	315 42	177 30	304 20	310 ..	352 30	292 ..	292 ..
15	London	315 42	265 ..	124 40	.....	344 20	262 25	262 25
16	Everett	311 18	320 ..	260 20	129 48	358 36	276 ..	276 ..
17	Early Sunrise	309 47	280 ..	146 40	288 12	528 ..	310 22	310 22
18	Reading Giant	302 30	287 30	315 20	160 36	481 4	300 24	300 24
19	Sharpe's Seedling	300 18	295 ..	198 ..	156 12	334 24	256 47	256 47
20	Troy Seedling	297 44	362 30	190 40	100 ..	457 36	281 42	281 42
21	Delaware	296 33	245 ..	201 40	151 48	303 36	239 44	239 44
22	Charles Downing	292 36	290 ..	198 ..	286 ..	469 20	307 11	307 11
23	Late Puritan	287 22	295 ..	253 ..	169 24	536 48	308 19	308 19
24	Wonder of the World.	287 6	295 ..	190 40	215 36	234 40	244 36	244 36
25	New Variety No. 1.	284 21	275 ..	363 ..	301 24	409 36	326 40	326 40
26	State of Maine	283 15	347 30	209 ..	290 24	440 ..	314 2	314 2
27	Early Six Weeks	280 22	285 ..	183 20	.....	205 20	238 30	238 30
28	Crown Jewel	280 8	272 30	179 40	145 12	352 30	246 ..	246 ..
29	Seattle	278 34	377 30	201 40	129 48	315 20	260 34	260 34
30	Clarke's No. 1	278 18	412 30	289 40	330 ..	528 ..	367 42	367 42
31	Early Ohio	277 53	325 ..	73 20	134 12	228 48	207 51	207 51
32	Vick's Extra Early	269 30	287 30	71 ..	389 24	414 ..	286 17	286 17
33	White Beauty	268 24	215 ..	179 40	325 36	238 48	245 30	245 30
34	Lightning Express	268 24	320 ..	44 ..	.....	286 ..	229 36	229 36
35	McKenzie	267 18	345 ..	216 20	222 12	363 44	282 55	282 55
36	Great Divide	266 12	320 ..	256 40	.....	407 14	312 31	312 31
37	Green Mountain	266 12	315 ..	194 20	.....	300 40	269 3	269 3
38	American Wonder	266 12	275 ..	212 40	290 24	598 24	328 32	328 32
39	Early Rose	265 31	380 ..	198 ..	198 ..	290 24	266 23	266 23
40	Carman No. 1	265 22	335 ..	201 40	129 48	299 12	246 12	246 12
41	Dakota Red	264 ..	360 ..	183 20	305 48	445 52	311 48	311 48
42	Hale's Champion	264 ..	292 20	249 20	207 ..	284 32	259 28	259 28
43	Money Maker	264 ..	305 ..	209 ..	.....	330 ..	277 ..	277 ..
44	Early Gem	261 48	310 ..	194 20	248 12	271 20	257 8	257 8
45	American Giant	261 31	.....	143 ..	.....	374 ..	259 30	259 30
46	Lizzie's Pride	260 42	325 ..	256 40	283 48	249 20	275 6	275 6
47	Freeman	260 42	377 30	110 ..	.....	271 20	254 53	254 53

Number. Name

48 Burpee's
49 Algoma
50 Ideal ...
51 Early W
52 Russell's
53 Thorburn
54 Early H
55 Lee's Fa
56 Polaris
57 Columbu
58 King of
59 Record.
60 Rocheate
61 Early No
62 Prize Tal
63 Quaker C
64 Bill Nye
65 Pride of
66 Beauty of
67 Burnaby
68 Brown's
69 Satisfacti
70 Monroe C
71 Fillbasket
72 Pride of
73 Early Pun
74 Victor Re
75 New Que
76 Queen of
77 Honeoye
78 Harbinger
79 Rural No.
80 Pearce's
81 Maggie M
82 World's F
83 Hopeful.
84 Empire St
85 Rural Blu
86 Good New
87 Ohio Jun
88 Clay Rose
89 Carman N
90 Brownell's
91 Peerless J
92 Houlton R
93 Table Kin
94 L. X. L.
95 General G
96 Stourbrid
97 Orphans
98 Seedling 2

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UNIFORM TEST PLOTS OF POTATOES—Continued.

Number.	Name of Variety.	YIELDS AT THE SEVERAL EXPERIMENTAL FARMS, SEASON OF 1897.					
		Ottawa, Ont.	Nappan, N.E.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, B.C.	Average of all the Farms.
		Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.
48	Burpee's Extra Early	259 36	370 ..	198 ..	129 48	228 48	237 14
49	Algoma No. 1	258 22	275 ..	139 20	224 24	418 ..	263 1
50	Ideal	255 12	350 ..	179 40	.....	354 24	279 49
51	Early White Prize	254 39	252 30	124 40	363 ..	316 48	262 19
52	Russell's Seedling	253 ..	307 30	205 20	180 ..	.....	236 27
53	Thorburn	251 54	265 ..	139 20	.....	296 22	238 9
54	Early Harvest	250 48	307 30	172 20	158 24	253 28	228 30
55	Lee's Favourite	248 36	412 30	82 ..	530 24	403 20	336 34
56	Polaria	248 36	182 30	154 ..	268 24	297 44	230 15
57	Columbus	244 12	292 30	165 ..	224 24	418 ..	268 49
58	King of the Roses	244 12	240 ..	245 40	79 ..	256 40	213 6
59	Record	243 6	325 ..	88 ..	211 12	370 ..	239 28
60	Rochester Rose	242 ..	312 30	154 ..	.....	322 40	257 47
61	Early Norther	240 54	217 30	176 ..	277 12	408 18	263 59
62	Prize Taker	238 42	195 ..	71 ..	246 24	528 ..	255 49
63	Quaker City	237 36	327 30	201 40	272 48	360 10	279 57
64	Bill Nye	237 36	295 ..	132 ..	77 ..	419 28	232 13
65	Pride of the Table	237 3	275 ..	168 40	.....	451 44	283 7
66	Beauty of Hebron	235 40	222 30	95 20	127 36	303 36	196 56
67	Burnaby Seedling	234 1	322 30	161 20	105 36	302 8	225 7
68	Brown's Rot Proof	233 45	295 ..	249 20	.....	454 40	308 11
69	Satisfaction	233 12	225 ..	176 ..	211 12	457 36	260 36
70	Monroe County	232 6	285 ..	194 20	.....	462 ..	293 21
71	Fillbasket	231 ..	300 ..	124 40	198 ..	244 36	219 39
72	Pride of the Market	224 24	262 30	253 ..	220 ..	354 12	262 49
73	Early Puritan	223 18	460 ..	172 20	246 24	528 ..	326 ..
74	Victor Rose	218 54	250 ..	165 ..	257 24	308 ..	239 52
75	New Queen	218 46	265 ..	110 ..	.....	411 ..	251 11
76	Queen of the Valley	218 37	317 30	183 20	.....	241 36	250 16
77	Honeye Rose	217 48	250 ..	22 ..	.....	322 40	203 7
78	Harbinger	216 50	267 30	113 40	169 24	176 ..	188 41
79	Rural No. 2	216 42	335 ..	91 40	.....	308 ..	237 50
80	Pearce's Extra Early	216 1	170 ..	146 40	.....	414 ..	236 40
81	Maggie Murphy	216 25	315 ..	106 20	226 36	205 20	213 56
82	World's Fair	214 55	270 ..	176 ..	387 12	454 40	300 33
83	Hopeful	213 49	295 ..	223 40	125 24	256 40	222 55
84	Empire State	211 53	252 30	194 20	213 24	498 40	274 9
85	Rural Blush	211 12	272 30	146 40	231 24	322 40	236 53
86	Good News	209 ..	345 ..	168 40	123 12	352 30	239 40
87	Ohio Junior	209 ..	175 ..	71 ..	321 12	403 20	235 54
88	Clay Rose	206 48	192 30	88 ..	.....	633 36	280 13
89	Carman No. 3	202 24	360 ..	88 ..	451 ..	447 20	309 45
90	Brownell's Winner	202 24	312 30	168 40	330 ..	563 12	315 21
91	Peerless Junior	187 ..	352 ..	161 20	.....	362 16	265 39
92	Houlton Rose	184 48	220 ..	238 20	226 ..	322 40	238 22
93	Table King	182 36	215 ..	14 40	92 24	176 ..	136 8
94	L. X. L.	179 18	400 ..	102 40	316 48	264 ..	252 33
95	General Gordon	176 16	345 ..	264 ..	.....	225 22	252 39
96	Stourbridge Glory	161 42	235 ..	102 40	204 36	.....	175 59
97	Orphans	149 3	257 30	66 ..	138 36	294 4	181 3
98	Seedling 214	139 42	200 ..	146 40	197 ..	256 40	188 ..

The following, which are omitted, failed to germinate or were injured during growth so that they could not be reported on:—At Nappan, Nos. 9, 45; Brandon, No. 4; Indian Head, Nos. 5, 7, 15, 27, 34, 36, 37, 43, 45, 47, 50, 53, 60, 65, 68, 70, 75, 76, 77, 79, 80, 88, 91, 95, and at Agassiz, Nos. 52, 96.

The twelve varieties of potatoes which have produced the heaviest crops at the several experimental farms during 1897 are the following:—

EXPERIMENTAL FARM, OTTAWA, ONT.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Holborn Abundance.....	402 36	7. Earliest of All.....	346 30
2. Seedling No. 230.....	400 24	8. Northern Spy	346 30
3. Seedling No. 7.....	381 42	9. Rose No. 9	338 48
4. Irish Daisy.....	372 51	10. Reeves' Rose.....	336 36
5. Chicago Market.....	356 24	11. Vanier.....	333 18
6. Drees' Standard.....	346 38	12. Daisy.....	332 37

An average crop of 357 bushels 55 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Early Puritan.....	460 ..	7. Seedling No. 230.....	390 ..
2. Clarke's No. 1	412 30	8. Early Rose	380 ..
3. Lee's Favourite.....	412 30	9. Freeman	377 30
4. Holborn Abundance.....	412 30	10. Seattle	377 30
5. I. X. L.....	400 ..	11. Burpee's Extra Early	370 ..
6. Seedling No. 7.....	400 ..	12. Troy Seedling	362 30

An average crop of 396 bushels 15 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. New Variety No. 1.....	363 ..	7. Everett.....	260 20
2. Reeves' Rose.....	341 ..	8. Great Divide	256 40
3. Reading Giant.....	315 20	9. Lizzie's Pride.....	256 40
4. Flemish Beauty Seedling...	304 20	10. Late Puritan.....	253 ..
5. Clarke's No. 1.....	289 40	11. Pride of the Market.....	253 ..
6. General Gordon.....	264 ..	12. Hale's Champion.....	249 20

An average crop of 283 bushels 52 lbs. per acre.

EXPERIMENTAL FARM FOR THE N. W. TERRITORIES, INDIAN HEAD, N.W.T.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Lee's Favourite.....	530 24	7. Brownell's Winner.....	330 ..
2. Northern Spy	530 24	8. Clarke's No. 1	330 ..
3. Carman No. 3.....	451 ..	9. White Beauty	325 36
4. Vick's Extra Early.....	389 24	10. Ohio Junior	321 12
5. World's Fair.....	387 12	11. I. X. L.....	316 48
6. Early White Prize.....	363 ..	12. Seedling No. 230.....	314 36

An average crop of 382 bushels 28 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Clay Rose.....	633 36	7. Early Sunrise.....	528 ..
2. American Wonder.....	598 24	8. Early Puritan.....	528 ..
3. Irish Daisy	591 36	9. Clarke's No. 1	528 ..
4. Brownell's Winner.....	563 12	10. Prize Taker.....	528 ..
5. Late Puritan.....	536 48	11. Rose No. 9	513 20
6. Seedling No. 7	535 20	12. Vanier.....	506 ..

An average crop of 549 bushels 11 lbs. per acre.

The twelve varieties of potatoes which have produced the heaviest crops, taking the average of the results obtained at all the experimental farms, are the following:—

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Irish Daisy	376 ..	7. Seedling No. 230.....	328 44
2. Clarke's No. 1.....	367 42	8. American Wonder.....	328 32
3. Seedling No. 7.....	365 55	9. New Variety No. 1.....	326 40
4. Northern Spy.....	351 26	10. Early Puritan.....	326 ..
5. Reeves' Rose.....	340 56	11. Brownell's Winner.....	315 21
6. Lee's Favourite.....	336 34	12. State of Maine.....	314 7

An average crop of 340 bushels 5 lbs. per acre.

The average crop of all the varieties of potatoes tested at each of the experimental farms was as follows: At Ottawa, 259 bush. 17 lbs. per acre; Nappan, 295 bush. 8 lbs.; Brandon, 171 bush. 30 lbs.; Indian Head, 230 bush. 55 lbs., and at Agassiz, 366 bush. 55 lbs. The average return given by the whole of the varieties at all the farms was 265 bushels 58 lbs. per acre.

AVERAGE CROPS FOR THE PAST THREE YEARS.

The results of experimental tests of varieties of grain to gain information as to their relative productiveness and usefulness, are much more reliable as a guide to the selection of the best sorts when the average experience of several years can be given. For the last three years a similar series of test plots to those reported in this bulletin has been conducted under conditions as nearly uniform as it has been possible to secure. The average of the crops obtained are herewith presented.

THREE YEARS' EXPERIENCE WITH VARIETIES OF OATS.

The twelve varieties of oats which have averaged the heaviest crops at the several experimental farms during the past three years are the following:—

CENTRAL EXPERIMENTAL FARM, OTTAWA.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Banner	68 30	7. Golden Giant.....	63 15
2. Golden Beauty.....	65 15	8. American Beauty.....	62 12
3. American Triumph.....	65 13	9. White Schonen.....	61 28
4. Columbus.....	65 12	10. Improved Ligowo.....	61 18
5. White Russian.....	65 ..	11. Bavarian.....	59 22
6. Abundance.....	63 23	12. Wallis.....	58 23

An average yield of 63 bushels 15 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Wallis.....	74 31	7. Golden Beauty.....	69 7
2. White Russian.....	73 31	8. Early Blossom.....	68 23
3. Banner.....	71 13	9. American Beauty.....	68 21
4. California Prolific Black....	70 7	10. Abyssinia.....	67 15
5. Columbus.....	70 ..	11. White Schonen.....	67 9
6. Early Gothland.....	69 13	12. Improved Ligowo.....	65 17

An average yield of 69 bushels 24 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre, Bush. Lbs.			Per Acre, Bush. Lbs.	
1. Banner	86	16	7. Golden Beauty	72	22
2. Early Golden Prolific	86	6	8. Rosedale	71	26
3. American Beauty	85	20	9. Bavarian	69	24
4. Holstein Prolific	77	25	10. Improved Ligowo	69	4
5. Golden Giant	77	15	11. Joannette	69	4
6. White Schonen	73	1	12. Columbus	68	11

An average yield of 75 bushels 20 lbs. per acre.

EXPERIMENTAL FARM FOR THE N.W. TERRITORIES, INDIAN HEAD, N.W.T.

	Per Acre, Bush. Lbs.			Per Acre, Bush. Lbs.	
1. Columbus	92	19	7. Improved Ligowo	84	29
2. Holstein Prolific	91	3	8. Wide Awake	84	21
3. American Beauty	89	1	9. Early Archangel	83	14
4. Abundance	86	33	10. Early Golden Prolific	83	8
5. White Schonen	85	13	11. Abyssinia	81	16
6. Golden Beauty	85	3	12. American Triumph	80	27

An average yield of 85 bushels 23 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre, Bush. Lbs.			Per Acre, Bush. Lbs.	
1. Early Gothland	61	4	7. Columbus	56	9
2. Lincoln	60	18	8. Oderbruch	56	4
3. Bavarian	58	28	9. American Beauty	55	33
4. Early Golden Prolific	58	16	10. Bonanza	55	31
5. Golden Giant	57	5	11. Hazlett's Seizure	55	23
6. Early Blossom	57	4	12. Banner	55	22

An average yield of 57 bushels 14 lbs. per acre.

The twelve varieties which have produced the largest average crops for the past three years on all the farms, and hence may perhaps be regarded as worthy of being placed at the head of the list for general cultivation are :—

	Per Acre, Bush. Lbs.			Per Acre, Bush. Lbs.	
1. American Beauty	72	10	7. Holstein Prolific	67	18
2. Banner	72	7	8. Improved Ligowo	66	18
3. Columbus	70	15	9. White Russian	65	25
4. Golden Beauty	69	1	10. Wallis	65	18
5. White Schonen	68	7	11. Bavarian	64	35
6. Early Golden Prolific	67	26	12. Early Gothland	64	22

An average yield of 67 bushels 32 lbs. per acre.

The Abundance, which is also a very promising oat, averaged 64 bushels 17 lbs. per acre, within five lbs. per acre of the Early Gothland.

THREE YEARS' EXPERIENCE WITH VARIETIES OF BARLEY.

TWO-ROWED BARLEY.

The six varieties of two-rowed barley which have averaged the heaviest crops at the several experimental farms during the past three years are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per Acre, Bush. Lbs.			Per Acre, Bush. Lbs.	
1. Sidney	41	39	4. Canadian Thorpe	37	47
2. Newton	40	25	5. Beaver	37	37
3. Bolton	39	18	6. Danish Chevalier	37	27

An average yield of 39 bushels 8 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per Acre. Bush. Lbs.			Per Acre. Bush. Lbs.	
1. French Chevalier.....	38	16	4. Canadian Thorpe.....	35	..
2. Danish Chevalier.....	36	12	5. Bolton.....	33	9
3. Prize Prolific.....	35	13	6. Newton.....	32	37

An average yield of 35 bushels 6 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre. Bush. Lbs.			Per Acre. Bush. Lbs.	
1. French Chevalier.....	48	46	4. Thanet.....	40	27
2. Sidney.....	48	9	5. Canadian Thorpe.....	38	6
3. Newton.....	42	1	6. Beaver.....	37	47

An average yield of 42 bushels 31 lbs. per acre.

EXPERIMENTAL FARM FOR THE N. W. TERRITORIES, INDIAN HEAD, N.W.T.

	Per Acre. Bush. Lbs.			Per Acre. Bush. Lbs.	
1. French Chevalier.....	60	23	4. Danish Chevalier.....	55	47
2. Beaver.....	57	3	5. Newton.....	55	46
3. Canadian Thorpe.....	56	4	6. Prize Prolific.....	53	33

An average yield of 56 bushels 26 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre. Bush. Lbs.			Per Acre. Bush. Lbs.	
1. Canadian Thorpe.....	40	20	4. Kinver Chevalier.....	35	44
2. French Chevalier.....	39	41	5. Beaver.....	33	46
3. Danish Chevalier.....	36	45	6. Prize Prolific.....	31	32

An average yield of 36 bushels 22 lbs. per acre.

The six varieties of two-rowed barley which have produced the largest average crops for the past three years on all the farms are:—

	Per Acre. Bush. Lbs.			Per Acre. Bush. Lbs.	
1. French Chevalier.....	44	25	4. Newton.....	39	40
2. Canadian Thorpe.....	41	25	5. Beaver.....	39	34
3. Danish Chevalier.....	40	42	6. Sidney.....	39	14

An average yield of 40 bushels 46 lbs. per acre.

SIX-ROWED BARLEY.

The six varieties of six-rowed barley which have averaged the heaviest crops at the several experimental farms during the past three years are:—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per Acre. Bush. Lbs.			Per Acre. Bush. Lbs.	
1. Odessa.....	56	44	4. Trooper.....	51	27
2. Mensury.....	56	9	5. Oderbruch.....	47	47
3. Royal.....	53	39	6. Petschora.....	47	6

An average yield of 52 bushels 12 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per Acre. Bush. Lbs.			Per Acre. Bush. Lbs.	
1. Mensury.....	52	37	4. Oderbruch.....	41	45
2. Surprise.....	46	5	5. Success.....	41	29
3. Trooper.....	43	36	6. Vanguard.....	41	18

An average yield of 44 bushels 28 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Mensury.....	54	11	4. Nugent.....	51	32
2. Common.....	53	43	5. Surprise.....	47	31
3. Trooper.....	52	21	6. Summit.....	46	15

An average yield of 51 bushels, 1 lb. per acre.

EXPERIMENTAL FARM FOR THE N. W. TERRITORIES, INDIAN HEAD, N. W. T.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Rennie's Improved.....	61	45	4. Common.....	60	23
2. Odessa.....	61	35	5. Oderbruch.....	58	36
3. Mensury.....	60	40	6. Trooper.....	57	1

An average yield of 60 bushels 6 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Oderbruch.....	35	5	4. Mensury.....	31	25
2. Odessa.....	32	24	5. Royal.....	30	27
3. Common.....	31	42	6. Petschora.....	30	

An average yield of 31 bushels 44 lbs. per acre.

The six varieties of six-rowed barley which have produced the largest average crops for the past three years on all the farms are :—

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Mensury.....	51	5	4. Common.....	45	42
2. Odessa.....	47	10	5. Royal.....	45	5
3. Trooper.....	46	43	6. Oderbruch.....	44	30

An average yield of 46 bushels 38 lbs. per acre.

THREE YEARS' EXPERIENCE WITH VARIETIES OF SPRING WHEAT.

The twelve varieties of spring wheat which have averaged the heaviest crops at the several experimental farms during the past three years are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Preston.....	25	77	7. Wellman's Fife.....	21	42
2. Monarch.....	22	46	8. Pringle's Champlain.....	21	27
3. Colorado.....	22	32	9. Alpha.....	21	20
4. White Russian.....	22	31	10. Advance.....	21	20
5. Goose.....	22	25	11. Stanley.....	21	18
6. Huron.....	21	53	12. Rio Grande.....	21	13

An average yield of 22 bushels 8 lbs per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Stanley.....	35	40	7. White Connell.....	33	53
2. Preston.....	35	13	8. Huron.....	33	7
3. Wellman's Fife.....	35	13	9. Advance.....	32	20
4. Red Fern.....	34	47	10. Old Red River.....	32	20
5. White Russian.....	34	20	11. Rio Grande.....	32	
6. Goose.....	34		12. Campbell's White Chaff.....	30	27

An average yield of 33 bushels 37 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.	
1. White Fife	38 47	7. Advance.....	34 53
2. Preston (2 yrs. only).....	37 65	8. Crown	34 30
3. Red Fife	37	9. Monarch	34 20
4. Rio Grande	35 57	10. White Connell.....	34 10
5. Goose.....	35 43	11. Old Red River.....	33 47
6. Pringle's Champlain.....	35 37	12. White Russian	32 50

An average yield of 35 bushels 28 lbs. per acre.

EXPERIMENTAL FARM FOR THE N.W. TERRITORIES, INDIAN HEAD, N.W.T.

Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.	
1. Huron.....	44 20	7. Alpha	41 13
2. Beaudry.....	43 37	8. Preston	41 10
3. Emporium.....	43 7	9. Rideau	40 53
4. Red Fern.....	41 27	10. Wellman's Fife.....	40 50
5. Red Fife.....	41 23	11. Crown	40 43
6. Pringle's Champlain.....	41 23	12. Herisson Bearded.....	40 40

An average yield of 41 bushels 44 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.	
1. White Fife.....	26 38	7. Alpha	24 10
2. Herisson Bearded.....	26 20	8. Campbell's White Chaff....	24
3. Preston	25 47	9. Red Fife	23 28
4. White Connell.....	24 40	10. Admiral.....	23 27
5. Old Red River	24 40	11. Red Fern.....	23 20
6. Wellman's Fife.....	24 20	12. Monarch.....	23 13

An average yield of 24 bushels 30 lbs. per acre.

The twelve varieties of spring wheat which have produced the largest average crops at all the farms for the past three years are :

Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.	
1. Preston.....	33 4	7. Red Fife.....	30 9
2. Monarch.....	31 2	8. White Connell.....	30 6
3. Wellman's Fife.....	30 36	9. Advance.....	30
4. White Fife.....	30 25	10. Goose.....	29 51
5. Rio Grande.....	30 23	11. Red Fern.....	29 49
6. Old Red River.....	30 17	12. Alpha.....	29 37

An average yield of 30 bushels 26 lbs. per acre.

It will be seen that the new cross-bred varieties, Preston, Advance and Alpha, which were originated at the Experimental Farms stand well to the front in these tests. Huron also, another of the cross-bred sorts, gave an average for the three years of 29 bushels 8 lbs. per acre, only 29 lbs. less than Alpha.

PEASE, INDIAN CORN, AND FIELD ROOTS.

The records of the varieties of pease are not yet sufficiently complete to permit of an average of the crop for three years being given, a large proportion of those under test, having only been grown for one or two years at most. With Indian Corn the varieties which stand at the head of the list for weight of crop are the large-growing dent sorts, which do not mature well in the short season at Ottawa, and hence do not make the best quality of ensilage.

The different varieties of field roots have not always been consecutively tested during the past three years and therefore records for the full time are not available. In turnips the Purple Top Swedes, in mangels the varieties of Mammoth Long Red, and in carrots the Short White varieties have given the best returns.

THREE YEARS' EXPERIENCE WITH VARIETIES OF POTATOES.

The twelve varieties of potatoes which have averaged the heaviest crops at the several experimental farms during the past three years are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Late Puritan.....	366	10	7. Dreer's Standard.....	316	7
2. Irish Daisy.....	359	4	8. Early Harvest.....	314	8
3. Holborn Abundance.....	357	8	9. Daisy.....	305	34
4. American Wonder.....	334	46	10. Chicago Market.....	305	23
5. Everett.....	328	52	11. I. X. L.....	301	35
6. Rochester Rose.....	316	59	12. Empire State.....	301	16

An average yield of 325 bushels 35 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Holborn Abundance.....	433	3	7. Irish Daisy.....	377	23
2. Early Puritan.....	403	13	8. Dreer's Standard.....	377	13
3. Rochester Rose.....	397	30	9. Empire State.....	376	23
4. Clarke's No. 1.....	394	2	10. Late Puritan.....	376	7
5. Carman No. 1.....	393	53	11. Lee's Favourite.....	368	30
6. I. X. L.....	391	50	12. Pride of the Market.....	365	50

An average yield of 387 bushels 55 lbs per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Pearce's Extra Early.....	383	47	7. Carman No. 1.....	338	33
2. Everett.....	363	..	8. Great Divide.....	337	20
3. Early Norther.....	360	33	9. Polaris.....	333	40
4. Pride of the Market.....	351	47	10. Early Puritan.....	332	27
5. Clarke's No. 1.....	344	40	11. Lizzie's Pride.....	323	53
6. Late Puritan.....	343	27	12. Early White Prize.....	312	57

An average yield of 343 bushels 50 lbs per acre.

EXPERIMENTAL FARM FOR THE N. W. TERRITORIES, INDIAN HEAD, N. W. T.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Lee's Favorite.....	350	36	7. State of Maine.....	291	52
2. Northern Spy.....	339	..	8. Brownell's Winner.....	283	52
3. Lizzie's Pride.....	325	48	9. Empire State.....	283	36
4. Early White Prize.....	307	28	10. Early Gem.....	280	48
5. White Beauty.....	298	24	11. Clarke's No. 1.....	260	44
6. American Wonder.....	293	20	12. Late Puritan.....	267	36

An average yield of 300 bushels 15 lbs. per acre. *

1. Clay R
2. Late P
3. Dakota
4. Vanier
5. Irish I
6. Prize T

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EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B. C.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Clay Rose.....	367	39	7. Troy Seeding.....	277	35
2. Late Puritan.....	319	15	8. Delaware.....	267	55
3. Dakota Red.....	308	5	9. Chicago Market.....	263	31
4. Vanier.....	304	35	10. American Wonder.....	263	1
5. Irish Daisy.....	299	23	11. Early Sunrise.....	259	7
6. Prize Taker.....	288	27	12. Moneymaker.....	251	47

An average yield of 289 bushels 12 lbs per acre.

The twelve varieties of potatoes which have produced the largest average crops for the past three years on all the experimental farms are ;

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Late Puritan.....	334	31	7. State of Maine.....	301	45
2. Irish Daisy.....	332	42	8. Carman, No. 1.....	300	46
3. Empire State.....	310	40	9. Northern Spy.....	297	21
4. Lee's Favorite.....	310	35	10. Early Puritan.....	296	48
5. Clarke's No. 1.....	309	48	11. Rochester Rose.....	292	28
6. American Wonder.....	302	11	12. Chicago Market.....	292	20

An average yield of 306 bushels 55 lbs. per acre.

CONCLUSIONS.

The results of these uniform tests of so many varieties of cereals and potatoes clearly show the wide differences which exist regarding their individual productiveness. Sown side by side, on the same day on similar soil with the same treatment and subject to precisely the same climatic conditions, the variations in the weight of crop are remarkable, and furnish the strongest proof of the importance of selecting those sorts for seed which have shown by their records that they are entitled to rank among the best.

The variations between the largest and smallest crops obtained from the sowing of different sorts under uniform conditions during the past three years, at the Central Experimental Farm, at Ottawa, are shown in the following table :—

Crop Sown.	Season of 1895.			Season of 1896.			Season of 1897.		
	Largest Crop per Acre.	Smallest Crop per Acre.	Difference in Crops per Acre.	Largest Crop per Acre.	Smallest Crop per Acre.	Difference in Crops per Acre.	Largest Crop per Acre.	Smallest Crop per Acre.	Difference in Crops per Acre.
	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.
Oats.....	74·4	16·6	57·22	85·10	45·10	40·0	57·12	18·3	39·9
Barley, two-rowed.....	43·16	20·8	23·8	51·2	34·38	16·12	41·7	14·8	26·47
do six-rowed.....	58·6	32·14	25·26	69·8	41·2	28·6	54·3	35·7	18·44
Spring Wheat.....	30·40	13·40	17·0	24·20	9·0	15·20	24·55	10·21	14·34
Pease.....	40·10	30·20	9·50	45·50	34·0	11·50	31·50	14·0	17·50
Potatoes.....	385·0	133·50	251·9	455·24	159·30	295·54	402·36	139·42	262·54

The averages obtained, as the results of the tests for three years, also furnish conclusive evidence that many of the more prolific varieties show that prolific tendency from year to year and under all the variations in climate found throughout the Dominion. Any of those varieties which are placed at the head of the list as excelling in productiveness for the past three years may be sown with the confident expectation of a good crop, provided the conditions are moderately favourable, and as the cultivation of these prolific sorts becomes more general, we may reasonably anticipate a considerable increase throughout this country in the average yield of grain in bushels per acre. In view of the large and increasing area under cereal crops in Canada, this subject is of great importance to the country. With the acreage now under cultivation every bushel of increase per acre in the cereal crops would add from two to three million dollars to the receipts of the farming community in Canada, a large proportion of which would be clear profit. Some of the desirable sorts referred to are already obtainable from seedsmen, others are being disseminated by growing them on the experimental farms and distributing the product in sample packages to farmers on application in all parts of the Dominion.

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